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A VIEW OF THE IMPROVEMENTS AND DISCOVERIES IN THE VARIOUS BRANCHES OF MEDICAL SCIENCE.

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AND

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Quærere verum. HORACE.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL. D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE IV.

Pathology of Strangulated Hernia.

The causes of herniæ are very numerous. They are usually attendants on the laborious pursuits of life, and are consequently but little under our control. Some, from certain circumstances of formation, are more disposed to this disease than others; and such persons will, of course, more readily be affected, whenever any of the ordinary causes are applied.

Almost every work which treats of the subject with which we are engaged, furnishes you with an enumeration of these, under the heads of predisposing and exciting causes. I apprehend it would be an unprofitable consumption of time, to enter into a consideration of such matters. In many diseases, it certainly is desirable that we should be well acquainted with causes which either predispose or excite; but I do not think our knowledge of these is of much avail, as far as regards the management of hernia. If tendency be induced by an habitual use of particular articles of diet, these must generally be continued to be employed—a change to what is esteemed a more wholesome selection of food, being oftentimes impossible, and constantly inconvenient. But that condition in life which denies to man the means of satisfying his necessary wants, we cannot improve; and then, here he must continue to submit to all the consequences which happen in any way to result. We ourselves belong to a laborious profession; and I have known instances in which rupture has taken place during unavoidable exertions. Yet the employment was still to be pursued; change was impracticable; and the promises held out by any which might be adopted, were far from wearing an aspect of encouragement. A knowledge of causes, to which I have thus alluded, is far from being burthensome, and you can readily acquire it by reference to most of the numerous modern essays on this disease. From the same treatises you can also learn the various divisions and classifications of herniæ in use amongst surgical writers. Some are valuable for the purposes of arrangement, and they decidedly afford to the memory no inconsiderable assistance. These are most interesting which have an immediate reference to practice. I shall avoid naming any other than these, to guard your attention from unnecessary distraction. It cannot be required that I should occupy your time with a vocabulary of the compound terms we employ. They are plainly set out in your books, and your classical acquirements enable you to understand the roots from which they are derived.

Gentlemen, I wish you to remember that herniæ exist in one or the other of two conditions. They are free from inflammation and all its consequences; or they are involved in inflammation, exposed to its results, and liable to its dangers. In the former conditions many inconveniences may arise, which art can in a great measure remove, and even permanently prevent; but the latter condition is a case of most serious moment. Its general management requires all the skill which we possess, and the manual treatment demands a degree of anatomical minuteness and of surgical adroitness, which it should be your business to endeavour to acquire. I wish to make you studious of that knowledge which will prepare you to conduct yourselves as you ought in such difficult and trying situations as those. With this view, I propose to pursue a simple method. By plain and easy steps, I hope to lead your understanding, so that subjects complex and embarrassing shall be comprehended with the facility with which your mind embraces the simplest form of hernial disease which I can set before its notice.

Some example or other of that form of hernia free from inflammation, you can see

almost daily amongst the extern patients of any hospital. The complaint is, that a tumour has taken place near some of those regions in which herniæ occur. It is described as varying in size according to the position of the body. Perhaps it is remarked that it wholly disappears in bed. The part being exposed, there is a visible swelling. It is usually somewhat elastic, and is irreducible; on coughing, it gives an impulse to the hand different to that communicated by any other abdominal tumour. It often disappears during this manual examination; it retires if the patient be placed recumbent, often spontaneously, or with very little assistance from the hand, and it may return as soon as the erect posture be resumed. The detail of the patient, and the examination by a surgeon, evince the hernial nature of the disease. A truss is ordered, attention to the bowels is directed, and great exertion is as far as possible to be avoided. In such a case you see a hernia in its most simple form, free from much inconvenience, and without any inflammation.

In our round of internal duty we are often directed to an example of a very opposite description; it is one of strangulated hernia. But before I proceed farther, you must allow me to examine the meaning of the epithet I have used. The term suggests constriction of the part protruded, and interruption of its circulation, to a certain extent. The effect of the compression is first displayed by the impediment which is opposed to the return of the venous blood. In this manner congestion is produced. You see this consequence ensue, when a bandage has been placed upon a limb, with due tightness, and you can readily comprehend what I mean, by forcing the ring of the lesser finger upon that which is next to it. The state of congestion thus induced leads to inflammation, and to all its usual attendants. These often arise with rapidity, while in many instances they take place in a slow and in even a much slower succession. Now, you are not to view this inflammation as one occurring under the ordinary circumstances in which you see its phenomena displayed. I do not mean to say, that the protruded parts are exempt from liabilities to which other parts are exposed. The common occasional causes will no doubt have their influence here, and they may even force the parts into a strangulated condition. However, such an occurrence, I presume, is very seldom met with, as I have never seen an example which I can call to my recollection.

I have said that strangulation cannot long exist, without the supervention of inflammation. This once excited, adds to the constriction in a manner which it is not difficult to understand. If you make the experiment with the ring, you will find the symptoms in the strangulated finger every moment increase in severity. But you must know this cannot depend on any positive diminution of the diameter of the ring; and therefore it is properly to be referred to an augmentation in that swelling which the ring in the first instance produced.

Should a hernia continue in a straniulated condition, the patient will inevtably perish. It has happened that a person has escaped from death without the assistance of art. When such cases are grouped in numbers, you may be led to suppose that they are far from being uncommon. Length of practice and extensive opportunity may place a few such before your notice. But unless these circumstances are favourable, you may not meet with an example in a great many years. Well then, I assure you, that unless stricture be removed the patient cannot possibly survive. Let us now consider the changes which take place from the commencement to the termination of such a case.

Strangulation of an intestine is sometimes accompanied with an immediate attack of pain. I have seen this frequently exemplified, and remarkably illustrated in the following case. A rope-dancer lost his balance, which he made a violent and unsuccessful effort to regain. Hernia suddenly took place, and severe pain as instantly occurred in a swelling "which had only then taken place, which he had never before perceived," and to which he never referred as the seat of all his severe suffering and the cause of all his sickness, weakness, and anxiety. This case may appear to contradict what I so lately asserted. You know it is my opinion that herniæ are gradually developed, nor did I in this instance find an exception to the position I maintain. From what I could learn, I am sure the disease had existed for a considerable period. It was concealed. It did not attract notice in its stage of incipiency. A violent effort produced a sudden increase, which with the other circumstances drew attention to a malady "that may have been, but certainly was not, previously perceived" by the patient. You are therefore to understand, that there may be an immediate pain in the hernial tumour. Again, we meet with cases in which a complaint is not made of any uneasiness in that part, for hours and even for some days. Nay, inflammation may take a strong hold among all the parts concerned, and proceed to a fatal height, the patient being unconscious that he is afflicted with rupture. He feels little uneasiness in the part, and he can scarcely be brought to think that a tumour exempt from soreness or pain—one too, which he perhaps remembers to have had for many years, can be the cause of his present suffering and of the danger in which he is now encompassed. An extreme range of practice supplies me with many illustrations of

this fact. These, however, I shall reserve for a future occasion, on which I hope to make them the subject of many useful and cautious remarks.

Whenever pain quickly succeeds the appearance of a hernia, or takes place after its sudden increase of size, the symptoms of strangulation arise in nearly the following order. You are now aware that there may or may not be local uneasiness. Its presence or absence may depend on something in the hernia itself, perhaps in the organs of which it is composed; on its previous duration, or on some peculiarity of the constitution of the patient. Whether there be local distress or not, nausea is, perhaps, the earliest symptom; after some time vomiting takes place, and then comes a general abdominal uneasiness, which is extremely severe about the umbilical region. Persons thus afflicted assume the recumbent posture, and they are averse to leave it, unless called by natural necessity. The disinclination arises from the unpleasant consequences of motion, and from a sense of weakness which is oftentimes exceedingly great. This debility you may read in the expression of the countenance, and in the restless motion of the arms. The trunk is preserved in a posture calculated to relieve abdominal pressure. It is bent, while the legs and thighs are flexed into the position they assume in sleep. The abdomen is thus eased from muscular and fascial inconvenience, and the aperture of descent is as far as possible relaxed.

In a few hours the strangulated parts become tense, and they feel more or less elastic. At first they may be handled and even roughly treated without pain. You will, however, meet cases in which little or none is induced, although the disease may have been of several days' continuance. Yet a period will sooner or later arrive in which it will set in, when the hand will be borne with impatience, and even a very light pressure create considerable suffering. Although matters are usually as I have just described them to be, yet I have seen cases in which persons found ease by a constant use of a force almost equal to any which is surgically employed. Such examples are to be considered as exceptions. They are found only when the disease is of old date; when it is of considerable bulk, and when a truss had been long and carelessly worn.

In the next place, the abdomen becomes tender, and is often exquisitely painful to the slightest touch. At the same time it is generally tumid. I do not mean that it is now tympanitic, but that it is large, fuller, firmer, and somewhat more elastic than is natural. Yet there are cases in which an opposite condition prevails, in which there is no pain, and in which the abdomen is perfectly soft and flaccid. I remember a striking instance of the absence of nearly all abdominal symptoms. A poor man came to my house to be relieved of a retention of urine. The catheter was easily introduced, and about half a pint of turbid brown urine was drawn off. During the operation my attention was drawn to a tumour at the left side of the scrotum. It was a hernia of four years' standing, and until the last three days had always disappeared at night. I soon believed it to be strangulated, and I concluded that the speedy performance of an operation was imperatively demanded. I hastened him in hospital; I assembled my pupils, and after a short delay, I took those operative steps which I believed to be necessary to the preservation of his life. An intestinal loop of about six inches was the only part which the sac contained. The bowel was perfectly green in its entire extent: there was fœtor; the intestine was distended so as to fill the sac completely, and that cavity did not contain any appreciable quantity of fluid. The intestine was mortified to the full extent of the protrusion. I dilated the stricture with all due care, avoiding all unnecessary disturbance of the parts concerned at the ring. I did not attempt reduction. I paid such local attentions as were required, and I put into execution those rules of treatment in which I shall soon have the pleasure to instruct you. The issue of the case was unsuccessful. The parts involved in the disease were removed. They make a unique specimen in my interesting collection, and are now exhibited to your inspection. Here, then, is established an important practical fact—we see mortification of a hernial protrusion, and death, without any such concert of abdominal symptoms as you are taught generally to expect, and which you are instructed to regard and to rely on as a guide for your judgment, and as a rule for your practice.

Except in cases necessarily acute, the pulse displays no characters of early disturbance, and, of course, we are to consider the circulatory system as free from engagement. When the strangulation is suddenly great, we often find a pulse very different indeed from that which you are prepared to meet. Thus, in the case of the rope-dancer, when I first saw him, it was small, frequent, and weak, and it remained so until the temperature of the extremities, which was for a time considerably depressed, returned to a natural standard. Indeed, the pulse not uncommonly presents a natural fulness and frequency, even after the symptoms of strangulation are considerably advanced. Every surgeon knows he has operated in cases in which the comparatively quick state of the pulse would not appear to have justified such a final proceeding. If we wait for the characters of the pulse, said to denote the presence of peritonæal inflammation, we will be most assuredly frequent-

ly overtaken by the consequences of a ruinous delay. You must correct this error of your teaching; the fault you may be prone to commit, I desire you to avoid. I beg of you, therefore, to banish the idea that the ordinary symptoms of the peritonæal inflammation are to be found in the disease of which we treat. They may talk of quickness, frequency, and hardness of the pulse, as attendants on, and guides in, cases of strangulated hernia. You must not allow yourselves to be mistaken in points of so much moment. They may attend this disease, and they frequently do not accompany it. Cases between which I have already drawn a distinction I need not define. Yet it is so desirable that we should always annex the same idea to the same word, that I am sure you will pardon the repetition when I remind you, that when I speak of quickness, I mean the rapidity of the stroke with which the finger is impulsed by an arterial pulsation. When I speak of frequency of the pulse, I mean to express the number of clicks performed within a minute, or any other definite time. Hardness of the pulse is esteemed a very leading symptom amongst the characters of disease. We are taught to watch for this quality of the pulse whenever serous membranes, or the important organs with which they are connected, are the seat of inflammation. In our clinical round, I have said such a pulse is hard—I have desired you to feel it, merely because I perceive the impossibility of making my ideas intelligible to you in any other way. But this is a digression—to some unnecessary—to others useful. I see I may return to the subject for a few minutes. Those who remember my instructions will be requited by the acknowledgment of persons who, perchance, have shown little attention, and I shall be thankful for the opportunity which is thus given to me to explain what they have not availed themselves of the opportunity to understand. You are aware, Gentlemen, you were negligent, and I could not refer you, as I did others, to the language in which no case would have addressed your sense. You fall under a defect, and you are not to listen to an attempt to convey to you in words ideas which are, in truth, not to be communicated. After this preface, you must expect that I shall fail—and I know I shall—but I wish to bring your attention to your business, and therefore I shall go on with my best powers, although with failing hopes of usefulness.

My notion of a hard pulse is, that it is one in which the pressure of the finger is strongly resisted—the artery feels firm, and seems like a tense chord in a state of vibration. The pulse which we find in dying persons is also chord-like, but then its canal may be easily obliterated. This is not the case with the hard pulse; for here much more force is necessary to produce that effect. You read and you hear of a "hard full pulse," but I apprehend that these qualities or characters of the pulse very rarely coexist. According to my conception, a hard pulse is always small; and the more chord-like and the less yielding, the more alarming the condition of the patient in whose case it exists. But this has been almost a digression, from which I am reminded to return. The medical man alone can draw inferences from the pulse: others are attracted by the pain, the general uneasiness and vomiting, which is often incessant; these are prominent symptoms, they are the first to awaken alarm, and they are generally present when our assistance is required.

Vomiting, as I hav already stated, often quickly succeeds the protrusion, and in other cases it may not occur for several hours. At first, the act does not differ from that which we consider natural: the same powers are engaged—the stomach, the diaphragm, the abdominal, and all the respiratory muscles, are concerned in the effort. Frequency of repetition seems, as it were, to subdue the power of many of these agents. The action of vomiting by degrees becomes less violent; and, finally, the stomach appears to discharge its contents, in a manner which bears a strong resemblance to the action observable in infants, when they reject what the stomach has too plentifully received.

Many authorities, of no mean repute, inform you, that constipation is an attendant on strangulated hernia: you must view such an observation with caution. In most cases the affirmation is true, but in many instances it is not so. The contents of the inferior part of the canal may find their natural course, if a stricture embrace only a portion of the diameter of an intestine; if the omentum be alone engaged, if the caput coli or the vermiform appendage happen to be the only parts involved in the descent, the peristaltic functions of the intestinal canal may be still performed—theoretically speaking, you perceive the possibility. Experience justifies the à priori conclusion. In a few cases of strangulation, I have found a diarrhœa, with tenesmus. An abdominal flux is by no means uncommon as a precursor of approaching death.

Now, I have sometimes said, a person must die in these circumstances, if surgery does not interpose its aid. How is the interference to be managed? We know the cause of danger. A bowel is protruded; it is so bound by the opening through which it has passed, that the circulation is interrupted, and its tubular perviousness is perhaps destroyed. Inflammation results; gangrene frequently follows. What is to be done? Even your inexperience suggests an answer—remove the constriction—return

the bowel—inflammation will be prevented—it will subside, and the perviousness of the canal will be restored. Were such a question proposed to the wisest surgeon who ever lived, he could not possibly reply in a more satisfactory manner. We must remove the stricture; we must, if we can, replace the bowel.

These are our sole objects. Our next business must be to consider the way in which these things are to be obtained. In general, an effort is made to return the bowel through the opening by which it had escaped; and if the attempt is followed by success, means are taken to prevent, or to remove, inflammation. The manner of returning the protrusion will vary, as the course of descent in one case differs from that in another. Amongst general observations, you are not to expect me to introduce particular rules. The latter might not be intelligible; but the former are applicable alike to all herniæ, and therefore promise to be so here.

To restore such a protrusion as we speak of, a position must be chosen, such as may diminish opposition to succeeding efforts; or, in other words, such as will relax all parts, muscular or tendinous, which may be engaged. In the next place, force must be employed; and it may not be amiss, before we proceed any farther, to consider the principles which should regulate its use.

We must bear in mind exactly what has happened. The boundaries of all apertures of descent are, to a certain degree, elastic. They yield to the power exerted on the abdominal side, they permit protrusion, and they rapidly return to the state from which the impelling power distended them. Hence the stricture which ensues. Hence those congestive consequences to which I briefly adverted. Now, you are to remember, that however rapidly or slowly herniæ take place, they make their way mechanically—a lesser part first, then a greater, and so on in succession, a greater still, until what may be aptly called a wedge-like portion of intestine is ultimately driven through.

The process thus employed to produce the disease, we are to imitate in our attempts for its removal: in fact, we must proceed mechanically; and if we do not, we will proceed blindly, and oftentimes dangerously. Whatever pressure we use, must therefore be directed by the following principles. First, to redistend the opening of escape; secondly, so to present the parts on which we act, that they shall be placed in circumstances, as far as possible, favourable to their return, and therefore as similar as possible to those which favoured their passage from the abdomen.

Over the hernial apertures we have very little control; yet I do think we have more than is commonly believed. We are instructed to place the muscles connected with all such openings, in circumstances favourable to what is called their relaxation; in other words, so to dispose them that we may not encounter their resistance. I will not delay to examine the propriety of the term relaxation; I will content myself with the remark, that they are always in a condition calculated for our purposes, when they easily yield to the hand, and bend under its pressure. I say they are then favourably disposed for our purposes, and so are all the openings with which they are connected; an obedient hollow yields before our force; resisting convexity no longer antagonises our efforts. On this subject there is one more point to which I think attention should be directed. It is this; endeavour, as far as you can, to procure a suspension of the resistance which respiration so constantly opposes to our success observe the proceeding of a man who has experience in the return of his own hernia, and let what you there see be imitated. In fact, the breathing is suspended during his efforts, and I have often derived much advantage by drawing the mind away from the business in which I was engaged, or directing a patient not to resist me with his breath—an instruction we easily understand and value.

Now, as to pressure: the object it has in view is to reduce the size of the protrusion to a magnitude accommodated to the diameter of the opening through which it has escaped. You have seen that the vessels are quickly engorged; flatus adds to the distensions, and the mucous secretion or the other natural contents of an intestine, may all contribute to swell the tumour which you propose to endeavour to reduce. Force can have no great effect on the vascular plenitude which exists; it will not empty the vessels, nor will it mould œdema favourably for reduction: over the more solid contents it cannot have any power. These matters admit of illustration by the following experiment. The subject before us has a scrotal hernia of ordinary size; you see it is now returnable, and I presume it was so during life. I again replace the intestine in the sac, and I will proceed to place it in a state of strangulation. For this purpose I will inflate it, for every strangulated intestine contains flatus. You perceive there is a fluid of some consistence already within it; I now inject the arteries with coloured water. You see the part exhibits evidence of its presence; I continue the process; the intestine swells; it is tense to the touch; it is fleshy to the feel; the arteries and veins are now distended. Some of the fluid will be found to have oozed through the mucous membrane, more has passed into the cellular tissue, giving a preternatural thickness to the tunics of the

intestine. The preparation being now complete, I shall endeavour to return the hernia into the cavity. Well, you remark I do not succeed; I now employ more considerable force, and yet you see I am opposed. Fullness of the vessels, œdema, fluid, and flatus in the intestine, all conspire to defeat me. But you heard air escape from the tumour, and now it can be more easily returned. Now, I say, you have here seen the causes which impede reduction in the case of all intestinal herniæ, and you have also seen that a diminution of the flatulent distension is the first step in order to insure success, for the pressure so generally and so unscientifically applied.

If this experiment be allowed to apply to what we see in the living, it seems plain to me that our object should ever be to reduce the flatus; and I here appeal to every one who gives common attention to his business, whether he is not always sensible of the return of flatus, before the rest of the swelling is replaced.

Flatus, then, is the principal difficulty with which we have to contend. Observe, I do not say, the only difficulty, but the principal one. Should the tumour contain fæces, they may be transferred by pressure from one part to another of the protruded intestine. Œdema may also be displaced in the same way; and surely the same remark will be found applicable to the vascular congestion, as well as to any additional fluid which may be contained. We may press this from the cervix, but we cause accumulation at the base of the hernia. We may urge them towards the aperture, and raise obstructions not to be removed, while we persevere in such a course of proceeding. But it here seems, if we can diminish the bulk caused by flatus, that a principal, perhaps I may with propriety affirm that the principal, impediment disappears. I shall now vary the experiment; I confine matters as they were before, but, in place of using pressure for the purpose of displacing the air, I produce its discharge by a puncture. The intestine lies collapsed, and now there is but little hindrance to its return.

So far, I think, matters are plain, for they are addressed to your sense. But, after all, the question is this, are they satisfactory? Do they square with what we really see in practice? Do they furnish any useful suggestions in our surgical operations? This is the criterion of the value of every thing we teach, or endeavour to explain. I have said, and I have appealed to experience, that we are always sensible of the return of flatus, before the reduction of an intestinal hernia is accomplished. We hear it as it yields before our pressure; we feel it beneath our fingers; and we know that when flatus finds its way into the cavity of the abdomen, the swelling glides quickly after it, and often, as it were, snaps back into the cavity it had deserted.

What is here perceived, as it were at a distance, and is, therefore, seen with the indistinctness which distance produces, we sometimes see under circumstances which permit us to form a nearer estimate of things as they really take place. You will find that a certain operation places the strangulated intestine before us. We see it; we feel it; it is congested; it is tense; it is firmly elastic; the aperture which bound the part into strangulation, is released by the knife. If the opening is free, the part returns as if by itself. If the opening be small, it may, and often does, require to be enlarged. In this last case, we are strikingly sensible of the return of the confined air, after which the intestine almost as instantly resumes its abdominal position. So far there appears to me to be no inconsiderable degree of correspondence. Now let us examine how far the means usually called to the aid of manual pressure, are calculated to liberate the confined air in the first instance, and, in the second instance, to release the concurrent parts from the dangerous situation in which they are placed. Of these at our next lecture.

A CONCISE ACCOUNT OF THE PHENOMENA AFFORDED BY AUSCULTATION.

AUSCULTATION consists in applying the ear to the chest, when it is termed *immediate;* or by applying the stethoscope invented by Laennec, when it is designated *mediate.*

Immediate auscultation may be tried by those commencing the study of this mode of diagnosis, especially in cases of children; but we shall presently perceive its inapplicability in many cases of adults. Thus, the ear cannot be directly applied immediately above or below the clavicle, in the hollow of the axilla, and beneath the mammæ in women. Moreover, the head can scarcely follow the movements of the chest as it is elevated and depressed; and even if it could, the friction it would produce must render the sounds somewhat confused.

In using the stethoscope, it should be held like a writing pen, the fingers being so placed near its base as to touch the thorax. All dress, except the inner garment, ought to be removed, and the instrument should be placed evenly upon the surface, and perpendicular to it. Every part of its base is to be in close contact with the chest, and retained so. The ear is then to be applied to the disengaged extremity of the instrument, and so adjusted, the hair, if long, being pushed back from about the ear, that the practitioner may distinctly hear the sounds in the lungs. As many persons are agitated by the use of the stethoscope, we should wait until any unfavourable

impressions have ceased, and this precaution is as necessary as in feeling the pulse.

The auscultator should first study the phenomena of natural respiration, in order that he may avoid confounding them with those caused by disease. He has ample opportunity in hospital and dispensary practice, in workhouses, and among the poor. There is no excuse for any student or practitioner to neglect studying the use of auscultation, unless defective hearing.

When about to examine the respiration, the small funnel-like part is to be removed from the instrument. On applying the stethoscope and adjusting the ear as already recommended, we perceive in a healthful adult, during inspiration and expiration, a distinct murmur, caused by the entrance of the air into the cells, and its passage out of them, and this is called *vesicular* respiration. This murmur is loud in proportion to the depth and frequency of the respiration, to the youth of the patient, to the thinness of the walls of the chest, and to the completeness of their dilatation. It is more strongly marked in women than in the other sex, and most intense in children, in whom it is denominated *puerile*, which term is also applied to adult respiration when it becomes very sonorous.

The respiratory murmur is also called *vesicular* respiration when in the air vesicles, or cells, to distinguish it from bronchial, and is more distinct in certain parts than in others. It is most perceptible in the axilla, in the space between the trapezius muscle and the clavicle, immediately beneath this bone, and at the posterior and inferior part of the chest, as in these parts the lungs are nearest the surface of the body. The respiratory sound is still louder and more distinct over the trachea, larynx, and root of the bronchi, and resembles the noise made by a bellows, or as if a large column of air was passing through a tube of large diameter—the air appears as if drawn from the stethoscope during inspiration, and as if expelled during expiration. This peculiar sound is called " tracheal respiration."

This sound also occurs when there are cavities in the lung of a certain extent, communicating freely with the bronchi, or when the tissue of the lung becomes indurated, and transmits the sounds more readily, which the air produces in passing through the large bronchial tubes. In such cases the respiration is puerile in the unaffected parts of the lung.

Function of Respiration in Disease.—The respiratory murmur may become stronger or weaker than natural in certain diseases, may be suppressed or extinct when the air tubes are obstructed in a certain part or constricted by spasm, as in catarrh, asthma, chronic bronchitis, hepatization, pulmonary apoplexy, &c., or when any substance, solid, fluid, or gaseous, is interposed between the lung and the ribs.

The respiratory murmur is sometimes heightened so as to resemble tracheal respiration, and may be mixed with the various wheezings designated *râles* by the French, and ronchi in Latin.

The respiratory murmur, when heightened or *puerile*, is not owing to any disease in the part which affords it, for it is only audible in healthful parts, whose action becomes temporarily increased to supply that of the diseased parts. Thus, in pneumonia the respiration is puerile in the healthful parts of the lung, as these are now compelled to perform the functions of the diseased. This kind of respiration is sometimes constitutional in nervous, hysterical, and hypochondriacal or neuropathic patients; and also if a part of the lung is impervious, as in the hepatization or solidification of the lung, empyema, hydrothorax, pneumothorax, or when the lung is compressed by anormal tumours.

The respiratory murmur presents numerous varieties, bothin a sound and diseased state of the lungs. It is easy to distinguish them under either circumstances. The respiratory murmur is diminished by many causes in addition to those already mentioned, as when the movements of the chest are impeded or arrested, when the small bronchial tubes are obstructed by viscid, mucous, or muco-purulent secretion, or by thickening of the mucous membrane, or the formation of adventitious membranes. The respiratory murmur may be completely suppressed when the lung is impervious to the air, or when any morbid growth, or gaseous, or liquid, effusion is placed between the lung and the walls of the chest. It rarely happens that the respiratory murmur is entirely suppressed in the whole of one lung, and some trace of it is always found near the clavicles and opposite the root of the lung, in which parts it is probably never inaudible.

Lastly, the respiratory murmur may be distinct, or combined with other sounds to which the term râle, ronchus, ronch, or wheeze, has been applied, and which are the following.

The term *râle, rattle or wheeze*, ronchus, ronch, is applied to the sound produced by the circulation of the air in the bronchi or air vesicles, which is different from the respiratory murmur in the normal or healthful state of the lung.

The râle, or ronch, rarely occupies the whole extent of the lung; it is confined to a certain part of it, the respiration remaining natural, or becoming *puerile*, in the other parts of the organ.

Râles indicate a contraction of some part of the bronchial tubes, or the presence of a fluid which obstructs them or the air vesicles.

Râles are five in number:—1, the râl

muqueux, mucous râle; 2, the râle sonore, sonorous râle; 3, the râle sibilant, hissing râle; 4, the râle crepitant humide, the humid crepitant râle; and 5, the râle crepitant sec, or dry crepitant râle.

1. The *râle muqueux, mucous rattle, ronch* or wheeze, is caused by the passage of air through the sputa accumulated in the bronchial tubes, or trachea, or through softened tubercular matter. The nature of the sound indicates that the fluid in the air tubes is unctuous, but not tenacious. This râle may be weak or loud, and continuous. When it is weak, or only audible at certain times, the air meets at intervals with portions of mucus; and when loud, the bronchi are almost entirely filled with it. When it arrives at a very high degree, it constitutes the gurgling sound, *gargouillement*, which is heard in the throat and chest of dying persons, and which arises from an inability to cough up the accumulated mucus, or expectoration.

This râle is compared to the sound caused by blowing through a pipe into soapy water, and occurs in catarrh, hæmoptysis, pneumonia, and the puriform sputa in phthisis. In catarrh, the air passes through mucus effused into the bronchial tubes; in hæmoptysis, through effused blood; in pneumonia, through a pulmonary abscess; and in phthisis, through matter in a tubercular cavity—in the last two diseases the respiration is *cavernous*. The history of each case will enable us to arrive at a correct conclusion as to the disease accompanied by this râle or ronch.

2. The *râle sonore, renflement*, or *sonorous wheeze, ronch*, or rattle, is compared to the sound of cooing or snoring, or that emitted by the base string of an instrument when rubbed with the finger. It is caused by the passage of the air through contracted bronchial tubes, induced by thickening of their mucous membrane, or in the spur-like processes or folds of this membrane at the division of the bronchi; a morbid change is generally and almost constantly observed in the bodies of those who have died of chronic catarrh, of of which this râle is pathognomonic, as also of chronic bronchitis, or winter cough, or peripneumonia notha of the older authors.

3. The *râle sibilant, or sifflement sibilant, ronch, or hissing râle*, is compared to the hissing sound caused by the sudden separation of two oiled surfaces, and occurs at the termination or commencement of inspiration. It may be acute, grave, dull, or sonorous. It is produced by thin, viscid mucus, which is not abundant, and more or less completely obstructs the smaller bronchial tubes, through which the air has to pass before it arives at the air-cells. It indicates a more serious disease of the lung than the râle last described, as it is seated in the more minute bronchial ramifications; and hence, when a considerable portion of these is affected, there is great difficulty of respiration. When the sound is acute and prolonged it arises from thickening of the mucous membrane of the affected tubes. In those cases characterized by this ronch or râle, the sputa present an arborescent appearance, which is formed in the minute bronchial ramifications. This is observable in the first stage of bronchitis. In some cases the expectoration is in round or oblong granules, which generally alarm patients.

4. The *râle crepitant humide*, the *crepitant* rattle, ronch or wheeze, is compared to the cracking or crepitation of salt, when thrown on live coals, or into a heated vessel, or on hot iron, or to that emitted by a piece of dry lung compressed between the fingers. It depends upon an exhalation of blood on the internal surface of the air-cells. This sound indicates the first stage of pneumonia, ceases when the inflamed part becomes hepatized, and recurs when resolution takes place. It is likewise characteristic of œdema, pulmonary apoplexy, and emphysema.

5. The *râle crepitant sec, or craquement* or dry crepitant râle, or ronch, resembles the sound made on breathing into a dried bladder, and is audible during inspirations only; it is a sign of emphysema.

Such are the different râles or ronches which have been described by auscultators. They are sometimes combined or glide into each other, when there is a change of disease by the implication of different structures. Practice alone will enable us to distinguish them in all their complications.

Respiratory murmur feeble or extinct, indicates pleuritis, empyema, hydrothorax, pneumonia, œdema, phthisis, vomicæ, pulmonary apoplexy, emphysema, pneumothorax and catarrh.

Bronchial respiration is present in the second stage of pneumonia, first stage of phthisis, and dilated bronchi.

Cavernous respiration is present in tuberculous abscess, pneumonic abscess, and dilated bronchi.

The *crepitous râle* indicates the first stage of pneumonia, œdema, pulmonary apoplexy, and emphysema.

The *mucous râle* is discovered in bronchitis, tuberculous, pneumonic, and gangrenous abscesses, and also in bronchial hæmorrhage.

The *sonorous and sibilous râles* are characteristic of bronchitis and emphysema.

Signs furnished by the Voice.

When a person speaks or sings, his voice thrills in the interior of the chest, and produces a trembling sensation in the whole cavity, which can be distinctly felt with the hand. When a cavity exists in the lung, as in phthisis, the trembling becomes very strong. We perceive the resonance of the voice against the chest most distinctly in the

axilla, between the internal border of the scapula and the vertebral column, and anteriorly at the angle formed by the clavicle and sternum. We do not hear any distinct articulation, but a sound more or less confused. In all cases it is most manifest in old adhesions. It is confused and nearly equal in all parts of the thorax in persons whose voice is grave and deep; while it is clear and distinct in women and children whose voice is acute. This phenomenon is of little importance, unless that it enables us to contrast it with what occurs in disease. The funnel should be retained in the stethoscope when the voice is examined. The sound of the voice is scarcely discoverable in the bronchi of a healthful lung, except under the clavicles and along the spine.

The principal modifications of the voice during *disease* are *resonance, bronchophony, pectoriloquy, and ægophony.*

Resonance is a louder thrilling of the voice than natural, or its existence in a part in which it is absent during health. It is sometimes very strong, as if produced at the extremity of the stethoscope applied on the chest; but it never conveys the impression as if it passed through the tube to reach the ear of the auscultator. A thickened and indurated state of the lung, caused by a mass of crude tubercles, or by inflammation, produces this phenomenon by rendering the lung a better conductor of the voice in the bronchi; hence the origin of the term bronchophony. This is heard when the lung is hepatized, "is the natural sound when the stethoscope is placed over the trachea, and is, according to Dr. Elliotson, synonymous with pectoriloquy." (Lectures Med. Gaz. 1833.) It Indicates the second stage of pneumonia, the first stage of phthisis, and also dilatation of the bronchi.

Pectoriloquy exists when the voice, distinctly articulated, seems to escape from the part of the chest to which the instrument is applied, traverses its whole length to strike the ear with its natural or sometimes a louder tone. It arises from the reverberation of the voice in a cavity in the parenchyma of the lung communicating with the bronchi.

It is termed *imperfect* when the voice thrills strongly under the stethoscope, seems to approach the ear, but never traverses the whole length of the tube.

It is called *doubtful* when the voice seems acute and suppressed like that of a ventriloquist, is arrested at the thoracic extremity of the tube, and approaches the character of simple resonance. It is a sign of a cavity in the lung formed by softened tubercles, or by pneumonic, or gangrenous abscess. It is also present in dilatation of the bronchi. It is modified by the tone of voice, the size and form of the cavity, the firmness of its walls, the degree of facility with which the air can penetrate it, and the existence or non-existence of adhesions with the pleura costalis. All these causes must be duly appreciated.

It becomes more evident according to the acuteness of the voice; and is most indistinct in those whose voice is grave and deep. It is not entirely suppressed in cases of aphonia. In some cases of phthisis, the voice is more distinctly heard, when the cylinder is placed over the cavity in the lung, than by the naked ear at the same distance.

When the cavity is very large the voice is heard very full and grave, similar to that passed through a cone of paper or a tube. But in small cavities it is doubtful, and especially if the portion of the lung which surrounds the abscess is permeable to the air. It is a positive sign of phthisis, though there may be no cough or any of the usual symptoms.

It is most distinct when the walls of a cavity are dense and firm.

It sometimes acquires a metallic tone when the cavity and the abscess become lined with a fibro-cartilaginous membrane. It is likewise very distinct when the cavity is superficial, its walls thin and adherent to the pleura costalis; but it is rendered doubtful when there is no adhesion, and the sides of the cavity become compressed together during expiration. In such cases the existence of a cavity must be determined by other symptoms, which will be described hereafter. Pectoriloquy is increased, and the voice seems as if passed through a tube when new cavities begin to communicate with those already established; but if the new excavations become very numerous and tortuous, it becomes dull and indistinct. We are to expect such modifications as phthisis advances.

The less fluid a cavity in the lung contains, the more distinct will be pectoriloquy, because the communication with the bronchi is generally open, and allows a free ingress to the air. But if the communication between the cavity and the bronchi be obstructed by the accumulation of matter, pectoriloquy is rendered obscure or doubtful, and acquires an intermittent character. It was stated by Laennec and most of his successors, that we can scarcely find a single individual in a ward with pectoriloquy, though at a previous visit, there had been several; and under such circumstances, we observe that the expectoration has been very much diminished or entirely suppressed.

It is also important to state, that in all doubtful cases of phthisis, every part of the lungs should be carefully examined with a view of detecting pectoriloquy. I have repeatedly known stethoscopists form an erroneous conclusion by not attending to this precaution.

Ægophony is a shrill tremulous tone of voice compared to that of a goat, which never traverses the stethoscope, and thus differs

from pectoriloquy. It is usually heard between the base of the scapula and spine, towards the inferior angle and external border of that bone, in the direction of an imaginary line from its centre to the sternum. It is the natural voice of some persons, and in these it is clearest at the root of the lungs. It is most evident when old adhesions exist. It indicates a moderate quantity of fluid in the cavity of the pleura, or of false membranes, somewhat thick and soft. It ceases when the effusion becomes considerable. It is characteristic of the first stage of pleuritis, and when it ceases is a sign of the commencement of the chronic form of that disease. It does not entirely suppress the respiratory murmur, but may obscure it.

Metallic tinkling, or *tintement metallique*, resembles the sound caused by dropping shot into a metallic or glass vessel. When strongly marked, the sound is termed *metallic resonance*. The respiration assumes this character, and resembles the murmur produced by air blown into a metallic vessel with a narrow aperture, in some cases.

Metallic tinkling indicates the presence of air and fluid in a large cavity, as in the pleura, or in an excavation in the lung, caused by the softening of tubercles. In this last case, the cavity communicates with the bronchi, and the sound may be heard when the patient coughs or speaks. It is caused, according to Laennec, by the tremulous motion given to the air which rests on the surface of the fluid, and indicates either a tubercular cavity, partly filled with very thin matter, the rest being occupied with air, or the existence of a serous or purulent fluid with some air in the pleura, as in pneumo-thorax. It is necessary for the production of the phenomenon in the latter case, that the cavity of the pleura should communicate with the bronchi by a fistulous opening, such as is caused by a tubercular abscess breaking on the external surface of the lung, or by a gangrenous slough, opening on the external side into the cavity of the pleura, and on the internal side into the bronchial tube. Thus there is a cavity in the lung, a fistula into the pleura and bronchial tube, and a quantity of fluid in the cavity of the pleura or chest, to give rise to the phenomenon of metallic tinkling. When there is metallic resonance and respiration, there is, in addition to the fistulous communication between the bronchi and pleura, an effusion of gaseous fluid into the cavity of the latter.

Laennec was also of opinion that metallic tinkling might exist in the absence of fistula, as in pneumo-hydro-thorax; that is, when the cavity of the pleura is partly filled by air and partly by fluid. In such a case, when the patient sits up, a drop of fluid will fall from the upper part of the cavity of the pleura, on the surface of the fluid in the lower part, and produce a minute tinkling sound, just as if a drop of fluid were let fall into a bottle about three parts filled with air and the rest with water. But when there is a fistulous opening, the air passes through it into the pleura and under the fluid, and becomes broken into bubbles, which rise to the surface, burst, produce a number of minute sounds, and which when reflected by the side of the cavity give rise to the tinkling. When the fistulous opening is large, or if there be several of them, the sound will resemble that caused by blowing into a bottle, and is called *amphoric respiration*. This sign, as well as the former, may exist together, as there may be small and large fistulæ in the same lung; or these sounds may succeed each other, as the fistulous communications may be blocked up with mucous or purulent matter. In this way the metallic tinkling may pass into the amphoric respiration, and *vice versâ*.

Friction by ascent and descent, or frottement ascendant et descendant.—This sign is compared to the ascent and descent of a small body, at the same time rubbing against another substance. This is caused by the effusion of air under certain points of the pulmonary pleura, which raises it, and renders its surface unequal. These inequalities rub against the costal pleura during inspiration, and especially near its close, and cause the sound under notice. M. R.

PHYSIOLOGY OF THE HEART.

The heart is compared by physiologists to a double aspiring and discharging pump, which distributes the blood through every part of the body. The movements of this organ are of two kinds—those that are manifest to the touch and inspection when the heart is uncovered, and these are the alternate contractions and dilatations of the ventricles and auricles, or the reservoirs and body of the pump.

The other motions are confined to certain parts of the cavities of the heart—these are the valves. They accompany the ventricular motions, and are termed *valvular movements* by M. Bouillaud. The noise made by both motions is similar to the tic-tac of a watch; the term *systole* is applied to the contractions of the ventricles and auricles, and that of *diastole* to their dilatation.

The movements of the auricles are very slight and not communicated to other parts of the heart, whilst those of the ventricles are very powerful, and strongly agitate the organ. The chief of the heart's motions is the systole of the ventricles, and principally of the left ventricle. It constitutes the active state of the heart, is accompanied by certain phenomena, as the shock and pulsation of the apex of the heart against the parietes of the chest, between the fifth and sixth ribs. This may be felt with the hand.

During the diastole the heart elongates itself.

The movements of the two auricles and ventricles are periodical. These are four, and those of the systole and diastole succeed each other and return periodically; each series of these motions, or each revolution of the heart, offers a contraction of the ventricles, and a striking of the apex of the heart against the walls of the chest. The motions of the left ventricle are synchronous, or nearly so, with the pulsations of the arteries.

The valvular motions consist in the successive descent and ascent of auriculo-ventricular and arterial valves, during the systole and diastole of the heart. The descents and ascents of the first coincide with the same inverse movements of the second.

The pulsations of the left cavities of the heart are most perceptible in the spaces between the cartilages, of the fifth and sixth ribs, and of the right cavities at the inferior part of the sternum, or in the epigastrium. The heart is situated at the inferior part of the sternum, and the cartilages of the left true ribs. Its base is upwards, backwards, and to the right, whilst its apex is turned to the left in front, and downwards about the fifth intercostal space. The impulse and pulsation of the apex of the heart is against the walls of the chest, between the fifth and sixth ribs.

The stopper or funnel should be in the stethoscope when examining the heart.

The movements of the left cavities are perceptible in the former, and those of the right in the latter situatons. In fat persons, we sometimes cannot distinguish the movements of the heart by the hand; and the space in which we can detect them with the stethoscope is not more than a square inch, but in thin emaciated persons, or in those who have narrow chests, we hear them under the inferior and middle part of the sternum, under the left clavicle, and often in the right side of the thorax. In persons well formed the unusual extent of the movements of the heart indicates a passive dilatation of the organ. All mental and severe corporeal exertion, many diseases and deformities, increase the movements of the organ; and these will be fully noticed hereafter.

Diastole of the Ventricles.—When the ventricles dilate they draw in the blood of the auricles into their cavity, and the blood cannot pass from the auricles into the ventricles without depressing the auriculo-ventricular valves. The afflux of blood produces distention of the ventricles and causes their contraction.

Systole of the Ventricles.—The ventricles cannot contract without pressing in all directions on the mass of blood which distends them. This attempt of the blood to escape through the auriculo-ventricular and arterial openings, closes the auriculo-ventricular apertures and opens the arterial valves, the fluid passes into the arteries; then it cannot return into the ventricles, as its return would close the valves. The systole of the auricles forces the blood which they receive from the veins through the auriculo-ventricular openings into the ventricles; but this movement is slight, on account of the absence of valves at the mouths of the veins.

There is a vast discrepancy of opinion as to the order of succession of the different motions of the heart.

Auscultation of the Heart in a normal or natural state.—Each complete pulsation or beat of the heart presents to the ear two successive bruits or sounds, one of which corresponds to the systole, and the other to the diastole of the ventricles. These are compared by two of the most recent auscultators, MM. Bouillaud and Raciborski, to the *tic-tac* of a watch or to the double click (claquement) of a sucker or valve.

The first bruit or sound is usually dull, less strong, and more prolonged than the other. It is isochronous with the impulse of the apex of the heart against the ribs, with the arterial pulsation, and consequently with the ventricular systole. If there exist any interval between this bruit and the pulse of arteries very remote from the heart, it is scarcely appreciable. M. Pigeaux maintains that this first bruit, which he terms *bruit inferieur*, is synchronous with the ventricular dilatation.

The *second bruit* is shorter and clearer than the first, and corresponds with the diastole of the ventricle. Laennec compared it to the lapping of a dog, and to the sound of the valve of a bellows.

The tic-tac of the heart is heard much better in thin and nervous subjects than those that are corpulent or plethoric; but it is impossible to enumerate the various causes which modify it, dependent on age, sex, and individuals—the state of quiet or agitation of persons, which prevents a precise description, and demands the most carefully conducted experiments to draw a correct conclusion. Thus, when the pulse is frequent, the two bruits or sounds succeed each other so rapidly that they sometimes appear to be simultaneous, although an accurate or nice ear can distinguish them. When the pulse is slow there is a slight pause between them.

A silence succeeds this double bruit, longer than the first, and corresponding to the repose of the ventricles. This, similar to the first silence, is longer in proportion as the beatings are slow.

It rarely happens but that the resounding of these bruits is perceptible in the precordial region in spare subjects, in those in whom the chest is narrow; and even in infants we hear it in all regions of the chest, even in the right posterior region, and in the lateral parts of the neck.

In thin persons the sounds are heard over the whole front of the chest, sometimes in the left dorsal region, and even occasionally in the right side. I have often verified the correctness of this statement in hospital and dispensary practice, in the presence of several medical students, in the years 1834, 5, 6. Dr. C. B. Williams found the sounds perfectly audible through the vertebræ between the scapulæ (op. infra cit.)

This transmission extends through the walls of the chest and the organs they contain, as if all these parts were endowed with an equal conductibility in all subjects; and we can appreciate the intensity of the sounds of the heart by the extent in which they may be heard on the surface of the chest, but there are a host of circumstances independent of the heart, such as spareness of habit, *embonpoint*, organic diseases, which change the conductibility of the parietes, and obscure this point of investigation.

The bruits of the heart may cause transient palpitations, which may be heard and seen at a distance from the chest. In general, the bruits of the beatings of the heart gradually diminish in proportion as we hear them at a distance from the precordial region.

The first bruit possesses its maximum of intensity immediately beneath, and a little external to the breast in the part corresponding to the auriculo-ventricular valves and orifices, whilst the second is better heard above, and internal to the breast, in the part corresponding to the sigmoid valves. But the differences of intensity, of elasticity, and of compactness in the different points of the chest, render the conductibility of the different parts unequal, often changing the seat the maximum of density.

The shock that the impulse of the apex of the heart impresses on the walls of the chest is sensible to the ear, as every perceptible movement is to the touch.

Various theories have been proposed to explain the movements of the heart, and the chief of these deserve a rapid notice in the order of their date.

Galen, Harvey, Senac, Haller, Bichat, Corvisart, Wollaston, Erman, Laennec, and many others, attributed the bruits and movements of the heart to its successive shortening of muscular fibres during their contraction.

Laennec thought that the first bruit of the heart depended on the contraction of the fibres of the ventricles, and the second on the contraction of the fibres of the auricles. At a subsequent period Sir David Barry demonstrated that the auricles were almost immobile, and that they remained in a state of permanent dilatation or plenitude, and this led Laennec to conclude that contraction of the auricular appendages produced the second bruit of the heart. According to this celebrated author, the ventricular systole caused the first bruit, which is the first movement.

The second movement is the ventricular diastole, which coincides with the systole of the auricle, and causes the second bruit.

Then comes the repose, or state of inaction of the ventricles.

It is objected to this hypothesis, that muscles which give a bruit during their contraction, never produce phenomena similar to the tic-tac of the heart, but a rotatory bruit similar to that of a coach, as we can ascertain by applying the ear to the wrist, and strongly squeezing the clenched hand or fist, or a bruit *de soufflet* analagous to that caused by certain diseases of the heart and arteries, and which we can hear by resting the ear upon a pillow, and in alternately contracting and relaxing the masseter muscles.

The second theory was that of M. Pigeaux, who maintained that the bruits of the heart depended on the shock of the blood against the parietes of this organ, and that the contraction of the ventricles or auricles was a simple coincidence, and but mediately concurred in the formation of these bruits. According to this author, the following is the order of the movements of the heart. The blood arrives at the auricles, dilates them without any bruit, they then contract very silently, and propelling the blood against the bottom of the dilated ventricles, whose parietes vibrate and give the first bruit, which M. Pigeaux termed *bruit inferieur*.

A very short silence succeeds the first bruit, continuing to the instant of the contraction of the ventricles. The blood, propelled by this sudden contraction, strikes the base of the pulmonary artery and aorta, and this percussion causes the second bruit or *bruit superieur*.

To the second bruit succeeds the repose mentioned by Laennec, followed by the silent contraction of the auricles with which the same movements commence. This interval of silence which separates the two bruits from the two pulsations, has been most appositely designated by M. Pigeaux —*silence*.

He also observes that the contraction of the largest muscles does not produce bruits like those of the heart.

He goes on to state, that when the ventricles contract, the heart is full of blood, and that it is only the shock of this fluid against the parietes of the heart that produces a high sound. He arrived at this conclusion after the following experiment. He plunged the hand into a sonorous vessel filled with fluid, and observed that the sudden and strong contraction of the hand produced no sound, whilst the liquid forced from the hand against the sides of the vessel afforded sound. It is therefore to the eccentric action of the interior liquid against the

parietes of the heart we are to attribute the first bruit. To prove that the first bruit is formed at the bottom of the ventricles, the second against the basis of the great vessels, M. Pigeaux maintains that the points where the bruits of the heart offer their maximum of intensity, are always about the distance of two or three inches from each other (Journ. Hebdomadaire, 1834, t. i). M. Bouillaud contends, on the contrary, that these points may displace themselves, and approach or remove from each according to the degree of conductibility in different parts of the chest.

There are other objections to M. Pigeaux's hypothesis. If the normal bruits of the heart depended upon the assigned cause, they ought to exist in disease of the valves, which we know completely destroys them, and replaces them with the anormal bruits, termed bruit de soufflet, de râpe, de scie, de lime, &c. This theory is opposed by positive facts; for it is easy to verify, that the first sound of the heart is synchronous with the ventricular systole.

The third theory is Dr. Hope's; who instituted a number of experiments on different animals, especially on asses, and arrived at the following conclusions:—

1. That the auricles contract immediately before the ventricles.

2. That the contraction of the auricles is inconsiderable, not exceeding a third of their volume; consequently, the quantity of blood projected by them into the ventricles is much less than their capacity would indicate.

3. That the impulse against the side is caused by the contraction of the ventricles, that of the auricles being much too slight to produce it; and that it is simultaneous with the contraction of the ventricle, and with the pulse.

4. That it is the apex of the heart which strikes the ribs.

5. That the contraction of the ventricles commences suddenly, but is still prolonged through the interval which occurs between the first and second sounds.

6. That the ventricles do not ever appear to empty themselves completely.

7. That the contraction of the ventricles is followed by a dilatation, which is a quick movement, accompanied by an influx of blood from the auricles; by which the ventricles expand, whilst their apex collapses and retires into the chest.

The whole movements of the heart, from the moment of the contraction of the auricles inclusively to the return of this same contraction exclusively, occupies about a second in the adult. This is divided into three parts by Dr. Hope. The duration of each of these has been fixed as follows by Laennec, and verified by Dr. Hope.

First period.—Systole of the ventricles, half a second.

Second period.—Diastole of the ventricles, a quarter.

Third period.—Interval of repose of the ventricles, another quarter.

According to this valuation, there is no interval allowed for the contraction of the auricles, which Dr. Hope declares to be very short; but however short it may be, it must precede the contraction of the ventricles.

Dr. Hope also maintains the following propositions:—

1. That the heart, distended or not, is always full.

2. That the auricles contract first, in about a fifth part; and that their contraction is propagated to the ventricles in such a manner, that the two movements of the heart appear to be continuous, and not successive.

3. That the collision of the column of blood against the internal surface of the ventricles, is the cause of the first bruit.

When the heart, once contracted, returns on itself, the blood passes from the auricles into the ventricles, strikes their parietes, and causes the second bruit, or sound; thus Dr. Hope assigns the same cause for the second sound that M. Pigeaux does for the superior bruit. M. Bouillaud successfully combats Dr. Hope's conclusions on both sounds. (Recherches experimentales sur les bruit du Cœur par M. Hope avec des notes de M. Bouillaud. Journ. Hebdom. 1834. tom. 2. No. 25.)

Dr. Corrigan had previously disproved the accuracy of this account of the rhythm. He contends, that the auricles contract first, the ventricles second, and then the pause occurs. According to him, the contraction of the auricles is slow, and that of the ventricles quick, and the impulse of the heart against the side is synchronous with the contraction of the auricles, and not with that of the ventricles; and that it is produced by the jet of blood from the auricles into the ventricles, which causes the tip of the heart to swell, and strike against the ribs (Trans. Dub. College of Physicians, 1830.) Dr. Corrigan also maintained, that the first sound was caused by the rush of blood from the auricles into the dilating ventricles, and not by the contraction of the latter, as was previously supposed; and that the second sound is caused by the percussion of the internal surface of the ventricles, and not by the contraction of their muscular fibres, as supposed by Laennec, or by the flapping of the valves, as suggested by Dr. Carswell.

The fourth theory was proposed about the same time as Dr. Hope's, by M. Marc d'Espine, and was analogous to Laennec's as to the motion of the heart, and to Dr. Hope's as to the rhythm.

The fifth theory was proposed by M. Magendie. He concluded that the first bruit

was produced by the result of percussion of the thoracic parietes by the apex of the heart during the contraction of the ventricles, and the second by the percussion of the same parietes by the internal surface of this organ during the dilatation of the ventricles. He alleged in favour of this theory:—

1. That in considerable effusions into the pericardium, where the thoracic parietes are separated from the centre of the circulation by the liquid, we do not hear the bruits of this organ.

2. That in hypertrophy they no longer exist; because the heart has not sufficient space to give a shock to the parietes of the chest.

3. That on raising the sternum of animals, we cease to perceive the bruits of the heart.

Others have observed cases of pericarditis with effusion, and with hypertrophy, in which the bruits were distinct, though quiet than normal (Raciborski). That the bruits are heard in animals upon the removal of the sternum, is a fact attested by Bouillaud, Raciborski, Descleaux, Hope, and Corrigan. Another fact is, that besides the two normal sounds, there is a third in thin persons, caused by the pulsation of the apex of the heart against the ribs.

The sixth theory is by M. Rouanet, who explains the rhythm and mechanism of the pulsations of the heart, as follows:—

First Period—Contraction.—When the ventricle begins to contract, the blood pressed on all sides raises or straightens the large valves, which are shaken on the opposed surface, and the first bruit is produced. It raises the sigmoid valves, escapes into the arteries, which it straightens; and hence the shock of the heart against the thorax; and the pulse.

Second Period—Dilatation.—The contraction scarcely terminates before the dilatation commences; the void caused in the ventricle gives rise to an aspiration in the two orifices; the distended arteries react on the blood, which returns quickly against the sigmoid valves; this causes the second bruit.

At the same time the great valves are depressed by the blood in the auricles, and the ventricle is refilled.

"The first bruit," says M. Rouanet, "is neard at the commencement of the ventricular contraction, which is the cause of it. This bruit is strong; it is in the relation to the energy of the ventricles; it is duller than the second; the valves that produce it are the largest, and the parietes which receive it are thickest.

"The second bruit is clearer, because the valves are the smallest and thinnest, and attached to more sonorous parietes. The shock results from the collision of two bodies, but is not the only cause of the bruit. Experience has shown that every flaccid membrane when suddenly distended, always gives a sound, which varies according to circumstances. The force is in proportion to that which distends the membrane, its noise augments with the fineness and inextensibility of the tissue which composes it, and the largeness, thickness, and extensibility of the membrane, render the sound duller. The auriculo-ventricular valves reunite from their dullness and action, conditions favourable to the production of the bruit. They are thin, resistant, and inextensible; they instantaneously pass from a state of the most complete flaccidity to a sudden and violent distention, resulting from the expulsion of the blood and the tension of numerous tendons, which are attached either by their borders or ventricular surfaces to the top of several fleshy columns. Consequently, whether we consider in the valves a surface which briskly rubs against another, or whether we see a sonorous elevated membrane submitted to a strong and instantaneous tension, it gives rise to an audible bruit." (Anal. des Bruits du Cœur, Soutenue à la Faculte de Medecine de Paris, per M. Rouanet, 1832.)

The exposition of M. Rouanet is the best refutation of all the preceding theories. The valvular movement unquestionably gives a bruit which none of the elements or causes mentioned in the preceding theories can produce.

On the contrary, neither the muscular contractions nor dilatations, nor the afflux of blood from the auricles into the ventricles, nor the friction of the sanguineous wave or column of blood against the parietes of the great vessels, nor the molecular collision, nor the percussion of the apex or base of the heart against the parietes of the chest, were all these causes very likely to produce bruits, and cannot produce the double clicking of the valves, or tic-tac of the heart.

The theory of M. Rouanet shews both the production of the normal and anormal bruits, and offers a unity and extension equally satisfactory both in theory and practice.

M. Bouillaud, whose work on anatomy, physiology, and diseases of the heart (Traité Clinique des Maladies du Cœur, 1835,) properly considers that the formation of the first bruit of the heart is equally dependent on the sudden percussion of the sigmoid valves against the parietes of the aorta and pulmonary artery. So with the second bruit, M. Bouillaud concludes that the depression of the auriculo-ventricular valves, which occurs at the same time with straightening or closure of the sigmoid valves, is not foreign to its formation.

M. Piorry has also made many experiments on the mechanism of the sounds of the heart, and ascribes them to many causes.

1. The force and rapidity with which the blood is propelled.

2. The thickness of the heart.

3. The dimension of the orifices.

4. On the diminution of the cavity when propelling the blood.

5. The firmness with which the heart contracts.

6. The shortening which the contraction of the fleshy fibres determines in the kind of tube or canal which the heart forms, and the passage of the blood through this organ.

The rhythm, or different movements of the heart, are far from being constantly the same, and vary according to age, sex, and individual. Mental emotions and corporeal exertions, as well as various external causes and diseases, modify them. There are many other derangements in disease which can only be detected by auscultation.

M. Raciborski gives the following account of the rhythm or successive motions of the heart:—

"*Duration of the Pulsation.*—A second.

"*First Peroid.*—Half a second. Systole of the ventricles and contraction of the ventricular cavity.

"*Synchronism.*—Gliding of the heartagainst the pericardium, stroke of the apex against the parietes of the chest, shock of the parietes of the chest in the precordial region, sensible to the touch, sight, and ear; impulsion and friction of the ventricular parietes against the blood; collision of the sanguineous molecules; straightening and tension of the auriculo-ventricular valves; impulsion of the sanguineous wave or current of blood against the auriculo-ventricular valves, and a slight motion of the straightened valves against the sigmoid valves, and a depression of the valves projected by the blood against the parietes of the arteries; expulsion of blood from the arterial orifices, and friction of fluid against the internal surfaces of their valves and parietes of the arteries; arterial pulsation; diastole of the auricle during the first half of this time, relaxed state of this part during the other half.

"One of the bruits or sounds of the heart, coincides with this first half of the time of this beating or movement.

"*Second Period.*—A quarter of a second. Diastole of the ventricle, enlargement of the ventricular cavity.

"*Synchronism.*—Gliding of the heart against the pericardium, elongation of its apex from the parietes of the chest (no sensibl-parietal shock); sinking of the auriculo-ventricular valves, afflux of blood from the auricles into the ventricles, friction of the blood against the tendinous ring which surrounds the open orifices, against the superior surfaces of the depressed valves, against the sides of the ventricles; collision of the sanguineous molecules, straightening or closing of the arterial valves after contraction; re-action of the arterial parietes on the blood expelled by the contraction, and a shock on return of the blood against the sigmoid valves, which it straightens or closes; state of relaxation of the auricles.

"Another bruit of the heart is heard during the dilatation, and is only separated from the first by an inappreciable silence.

"*Third Period.*—A quarter of a second. Repose, or a state of relaxation of the ventricles following the termination of the contraction of the auricles; passage of the blood from the auricles into the ventricles; distention of the ventricles, occlusion of the arterial orifices." (Nouveau Manuel Complet d'Auscultation et de Percussion, &c. Paris. 1835).

Dr. C. B. J. Williams gives another account of the rhythm or movement of the heart. According to this author, the first sound is caused by the systole of the ventricles, and is synchronous with the pulse of the arteries near the heart. The second or short sound is produced by the ventricular diastole or dilatation. Such are the conclusions of Dr. C. B. J. Williams. (On the Diagnosis, Pathology, and Diseases of the Chest, &c. 1835).

When the chest is fully expanded during inspiration, the margins of the lungs overlap the pericardium, and this soft substance intercepts the propagation of the impulse to the parietes. After expiration, the apex and a part of the body of the heart come in immediate contact with the walls of the chest, and the pulsations may be felt more distinctly, and over a greater extent. Tumours behind the heart, flatulent distention of the stomach, enlargement of the liver or spleen, contraction of the chest from pleurisy or rickets, will push the heart closer to the chest, and render the impulse stronger.

These sounds are naturally most distinct in the space between the cartilages of the fourth and seventh ribs on the left side, and on the lower part of the sternum; the former corresponding to the left, and the latter to the right side of the heart.

The sounds are rarely distinct beyond these parts, in persons of moderate size and good proportions, when in health; but may be heard in diseases in other parts.

Dr. Williams concludes, after a vast number of experiments, that the following is a correct exposition of the sounds of the heart:—

1. That the auricles contract first, producing no sound.

2. That the auricular contraction (systole) is immediately followed by the ventricular, which is accompanied by the first or dull sound. The systole, by straightening the anterior convexity of the ventricles, brings their apex into forcible contact with the ribs, and thus produces the impulse.

The systole or contractions, by throwing an additional quantity of blood into the arteries, causes the arterial pulse, which in arteries near the heart is synchronous or simultaneous with the ventricular systole, but in those more distant succeeds it at an interval occupied by the transmission of the wave through the blood along the elastic tubes from the heart.

3. That the ventricular systole is immediately followed by the diastole, which is accompanied by the second or short sound.

4. That there is then an interval of rest, at the conclusion of which the auricles contract; and the series of motions is repeated as before.

It is still uncertain in what way the ventricular systole produces the first sound, or how the diastole developes the other. Dr. Williams is of opinion that the first sound is produced by the muscular contraction itself; and the second by the re-action of the arterial columns of blood tightening the semilunar valves at the ventricular diastole. Dr. W. also maintains that the conclusions of Laennec, Turner, Corrigan, D. Williams, Pigeaux, Magendie, Roaunet, Carlile, Hope, Bouillaud, and Spital, on the causes of the sounds of the heart, are erroneous. (Op. cit. April, 1335).

Pulsation of the Heart.—The pulsations of the heart may be increased or diminished, and heard over a greater extent of the chest than in health, or confined to a more limited space.

The increase of extent is usually perceptible along the left side from the axilla to the region of the stomach, next along the same space on the right side, then at the posterior part of the left, and most rarely at this last part on the right; the intensity of the sound becoming less in the order just described.

When the pulsations are audible in these different points, there is diminution of the thickness of the walls of the heart, and particularly those of the ventricles. There is also dilatation of the organ, so that it strikes the sternum and ribs with a larger surface than natural. But other causes, independent of disease of the heart, produce the same result, as narrowness of the chest, emaciation, hepatization of the lung, or its compression by a fluid or gaseous effusion, a cavity in the lung with firm walls, nervous agitation, fevers, mental or corporeal exertion, or any thing which accelerates the respiration and pulse.

When the pulsation of the heart is confined to a spot, or cannot be felt by the patient, there is increased thickness of the walls of the heart, or hypertrophy.

Again, the pulsation may vary, it may be higher or lower than usual, and louder in the right than in the left side of the chest. In such cases there is a fluid, either liquid or gaseous, or a tumour in one side of the chest, in the mediastinum, or in the cavity of the abdomen.

The Impulse.—The impulse of the heart varies in health, and is much stronger at one time than at another. It may become so strong as to elevate the walls of the chest, and to be perceptible at a considerable distance. In such cases, if we hold the stethoscope between the fingers against the cartilages of the ribs, we will observe it raised and shaken during each impulse. The force of the impulse is proportionate to the thickness of the walls of the ventricles, and it is increased by walking, running, laughing, coughing, fever, &c. The cause of increased impulse, when permanent, is hypertrophy of the heart, and the best remedy, in addition to leeching, cupping, and counter-irritation, is hydriodate of potass. I have employed this remedy in several cases with the greatest success.

It often happens that the impulse will be violent on applying the stethoscope, but subside in a few minutes; and hence we should wait until the patient is perfectly calm before we examine him.

Diminution of the heart's action sometimes depends on thinness and weakness of the walls of the organ, and its contractions are perceptible in a wide extent of space; at others it is induced by interruption of the pulmonary circulation, and in such cases may co-exist with hypertrophy. Mental emotions of a depressing kind, such as fear, grief, &c. may diminish the heart's action. It also occurs in the last stage of hypertrophy.

Of the Sound.—The sound of the heart's contraction may be duller, clearer, or louder than natural, or totally different from that in health. Thus, a diminished intensity of sound is caused by thickening of the cardiac walls; and when it occurs with weakness of impulse, it indicates ramollissement or softening of tissue.

The most common alteration of sound is an increased clearness and loudness, which denotes a thinness of the walls of the heart. This may be emitted by the auricles or the ventricles, and its site can be easily determined.

Auscultation of the Heart in a morbid State —Anormal Bruits.—As the action of the valves of the heart is the cause of the normal or natural bruits, it is clear that lesions of these parts which modify their action must also change the bruits of the heart and render them anormal. On the other hand, if the movements isochronous with the action of the valves, such as the gliding of the heart against the pericardium, the beating of its apex against the walls of the chest, the passage of the blood against the parietes of the ventricles and against the surfaces of the valves; if all these movements are aphonous or synchronous in the natural state, the mind recognises the elements of

the bruits, and that these cannot be completely developed in lesions of the heart, whether functional or organic, and must produce new bruits in the præcordial region.

The retrogradation of the blood from the ventricles into the auricles, from the arteries into the ventricles, which cannot occur in the normal state, but which results from certain lesions of the valves, must produce anormal bruits. We shall perceive hereafter, that these indications are fully verified, and shall proceed to notice the modifications of the valvular bruits.

It is difficult and indeed impossible in the present state of science, to trace the precise limits between the different normal and anormal shades, whether of intensity, or tinkling, presented by the valvular bruits. The intensity varies very much; it is sometimes as loud as the stroke of a clock, and may be heard at a distance; whilst in other cases it is so slight that it can scarcely be distinguished.

The bruits are intense in proportion as the valvular and ventricular movement is more considerable, as the tension of the valves is increased, and as their thickness, and consequently that of ventricles is less. The valvular bruits sometimes offer a remarkable character, a crackling like that given by compressing dry parchment, a dry hard clear tinkling, as if two pieces of parchment were strongly and suddenly rubbed against each other; and which M. Bouillaud cons-iders to be connected with a hypertrophic thickness re-united to rigidity of the valves.

At other times the bruits of the heart are rough, hoarse, and stifled. These depend on a swelling and flaccidity of the valves, and is only a degree of the bruit de souffle or bellows sound, which will be described hereafter. M. Bouillaud has observed that, when the bruit under consideration terminates in the bruit de souffle, there are incrustations or vegetations on the valves.

But when the tic-tac of the heart, or valvular bruits are not impeded, we may be assured that the lesions of the valves do not oppose their free action.

Every time that the lesions of the valves do not prevent their movement, the valvular bruits are never completely suppressed. The anormal bruits, whose formation is not incompatible with the free action of the valves, may exist simultaneously with the normal bruits.

But when the valvular lesions oppose the free action of the valves, the normal bruits will cease to be heard, and others will replace them.

The anormal bruit which most frequently replaces the normal or tic-tac of the heart is the *bruit de souffle*, which often precedes the extinction of the valvular bruits.

The *bruit de souffle* is but a variety of the *bruit de soufflet* of Laennec, or *bellows* sound; the other varieties observed by this author the *bruit de scie* (the sound of a saw,) *de rape* (of a rasp,) *de lime a bois* (of a wood file). All these bruits have a common character—that of a souffle or puff. There is also the bruit sibilant or sibilant, observed by M. Bouillaud, which he regards as an acute degree of the bruit de soufflet, and places between the same differences as between *souffler* to blow or puff, and *siffler* to hiss or whiz.

The bruits de *souffle*, de *scie*, de *rape*, and *sibilant* are easily imitated by expelling the air with more or less force through the mouth half closed. There is another bruit de soufflet which resembles a slight aspiration of a small quantity of air. The causes of the different anormal bruits deserve attention, and depend on physiologic, or functional, and pathologic or organic lesions of the heart.

A bruit or vibratory motion depends on two causes; 1, an instrument of vibrations; and 2, an agent or a power that excites them.

The parietes of the heart, and especially the valves, and perhaps also the blood, are the chief instruments, the principal seat of vibrations.

The movement of the blood caused by the ventricular contractions and dilatations becomes the principal agent of vibrations. It follows from these facts, that every modification in the conformation of the heart, necessarily affects the bruits of the heart. M. Bouillaud has proved this conclusion by the most positive facts.

It follows from the observations of this able professor—

1. That if organic contraction of orifices is not the only lesion which can produce the bruit de soufflet, it is the most frequent cause, as it was present in nineteen out of twenty cases which he observed.

2. That in all cases, the bruit de souffle can perhaps be referred to one only and the same condition—to an increase of friction (*surcroit de frottement*) during the passage of the blood through the orifices or cavities of the heart. This is likewise the cause of the bruit de soufflet in arteries, and in all lesions.

The following are the different lesions in which M. Bouillaud has heard the souffle or puff:—

1. When there are sanguine concretions in the orifices of the ventricles.

2. In contraction of the aortic orifice, whether congenital or acquired, independently of the state of the valves.

3. In cases in which, without the contraction of the orifices, the valves, covered by vegetations, or encrusted with calcareous or cartilaginous layers, present an unequal surface, or when swelled only, they cannot exactly close the orifice. This is the first insufficiency.

4. In two cases, in which, without corresponding contraction of the auriculo-ventricular orifice, the auriculo-ventricular valves have contracted adherences, which oppose to their free straightening, produce the second insufficiency.

5. In some cases of dilatation of the auriculo-ventricular orifices participating with the dilatation of the ventricles, is the third insufficiency.

6. Sometimes, but not permanently, in considerable hyperthropies of the left ventricle with dilatation of its cavity. It is after moral fatigues and emotions that the bruit de soufflet is best heard in these last cases.

7. Sometimes in chlorotic, nervous, and anemic individuals, the bruit de soufflet corresponds with the access of palpitation.

8. In cases of profuse hæmorrahages. In fine, this sound may be induced in cases of compression of the heart, by an effusion into the pericardium, or by any kind of tumour.

It is evident, that in all these cases the lesion, whether organic or functional, always terminates by an increase of friction. This increase is manifest in the first two cases. In the third and fourth the valves cannot close their orifice during dilatation, in consequence of the inequality of their surface, permit the blood to flow from the ventricles into the auricles, and this reflux through a strait orifice naturally produces a friction, more or less remarkable. It is the same in the fifth case, in which the circumference of the dilated orifices form the base of the valves outwards. and do not permit them to cover their orifice completely. The blood then reflows from the auricles into the ventricles, through the straight interval between the free edge of the valves, and produces a friction which causes the bruit de soufflet.

In the sixth case, the heart does not present organic lesion; but the energy of the ventricular contractions and the proportional force with which the blood is propelled against the orifices, suffice to explain the increase of friction or bruit.

In chlorotic cases we generally find dilatation of the ventricles with thinness of the parietes. Finally, M. Bouillaud attributes the bruit de soufflet heard in copious hæmorrhages, "to the convulsive vivacity with which a small column of blood is expelled by the heart through a cavity and orifice which is very much straightened, in consequence of the retraction of the heart upon itself, so as to mould itself in some measure to the small quantity of blood which it receives."

It is therefore now certain that the bruit de soufflet does not depend on one, or the same lesion, but that many anatomical and purely physiological conditions produce it. But among these causes there are several which give rise to certain and invariable kinds of bruit de soufflet. Thus, observation has shewn that in contraction of the orifices of the heart, by induration of the valves, that we uniformly hear the bruits de *rape*, de *seil*, the *sifflement*, whizzing or hissing sound, or the *sibilus musical* or musical wheeze or whistle. The bruit de souffle, on the contrary, may be heard in all the lesions already mentioned.

When the bruit de souffle accompanies organic contraction of the orifices, this contraction depends on an induration of the valves much more frequently fibrous or fibro-cartiliginous than osseous, with the surface oftener united with valves than rugged, with less contraction, and with ventricular contractions and dilatations of moderate force rather than with energetic movements.

The bruit de soufflet may cease and reappear suddenly, and when continued or permanent, indicates organic lesion; it may be suddenly and forcibly excited by mental emotions in nervous, hysterical, and hypochondriacal persons, and in those predisposed to hæmorrhages. It may occur during perfect health; I have frequently found it very strong in young women at my first visit, in whom it was absent at the next. When periodical it indicates functional or transient disorder; but this if long continued may terminate in organic lesion. This bruit may be absent in the heart and present in the large arteries or *vice versâ*. In some cases it can only be detected in the recumbent posture. It is most frequently heard in the cases already mentioned, when the heart is affected with dilatation and hypertrophy; and is pathognomonic of narrowing or contraction of the valvular orifices. In all cases it may be stronger at one time than at another, in consequence of mental emotions, errors in regimen, and numerous other causes. The conditions of the bruit de *seil* and de *rape* are totally different; these are chiefly heard in cases of considerable contractions of the orifices, and coincide with a rugged surface of the valves, and with strong movements of the heart.

These bruits are caused by the resounding of the vibrations, caused by the passage of the blood against the unequal surfaces.

The bruit sibilant is an intense degree of the bruit de soufflet, and is caused by a great contraction of the valves. M. Bouillaud found the left auriculo-ventricular opening so closed as to form a slit of three lines in diameter.

It is important to state, that it is in this normal state of the the heart impossible to distinguish the bruits of the left side of the heart from those of the right, and consequently to assign the resounding of any of these to any particular spot in the præcordial region. Nevertheless, when there is a strong anormal bruit under the breast, there is a presumption that it belongs to the left ventricle, and to the right if heard under the sternum. But these observations are far from being invariably verified.

The greater number of lesions of the valves and orifices of the heart are followed by hypertrophies of the ventricles; and in such cases the primitive lesion and consecutive hypertrophy occupy but one ventricle; this affects the normal one; so that it is impossible to distinguish to which the bruits belong. It is also difficult to distinguish the anormal bruits caused by disease of the auriculo-ventricular valves and that of the arterial valves.

If the bruit is heard during the contraction of the ventricles that the aortic valves are diseased, and the presumption will be much stronger if the anormal sound is heard over the aortic orifice. When the bruit is caused by reflux of the blood from the ventricles into the auricles, it is heard better, according to M. Rouanet, towards the apex of the heart than near the aortic orifice. When the anormal bruit is heard during the dilatation of the ventricles, it is probable that the disease exists in the auriculo-ventricular orifices, and depends on the passage of the blood through the diseased aperture.

According to M. Bouillaud, there is another bruit de soufflet in organic contraction of the orifices, whether during the dilatation of the ventricles, when the incompetent valves are the sigmoid, or during the contraction of the ventricle, when the disease is in the ventricular valves.

Bruits caused by Disease of the Pericardium—Bruit de Frolement.—This is compared to the sound made by rubbing silk or taffety. This depends on a diseased state of the pericardium or its opposite surfaces, which rub against each other during the contraction and dilatation of the heart in incipient pericarditis, when they are dry and tenacious, before false membranes are formed, or when they begin to cover the surfaces.

Bruit de Cuir Neulf—Craquement de Cuir.—New leather sound. This was compared by M. Collin to the crackling of a new saddle when placed on a horse. It is caused by the pulling of dense false membranes, which give considerable resistance during the movements of the heart. It has never been heard except in pericarditis.

Bruit de Raclement.—Scraping or grating sound. This was perceived by M. Bouillaud in the left præcordial region, and was caused by a stony concretion which raised the visceral pericardium.

Bruits de Souffle de Scie, de Rape.—Though these may belong to diseases of the heart itself, they sometimes accompany lesions of the pericardium. They are produced by the friction of the two surfaces of the pericardium against each other, covered with false membranes, during the stroke of the apex of the heart. The bruits attendant on lesions of the pericardium are more superficial and circumscribed than those of lesions of the heart.

The anormal bruits of the heart are synchronous with the movements of that organ, while those of respiration coincide with inspiration and expiration.

Clequestis metallique, tintement metallique, tintement auriculo metallique, is the term applied to the sound produced by the percussion of the apex of the heart against the walls of the chest during the contraction of the ventricle. It is distinctly heard in thin nervous subjects who suffer from palpitations. It does not prevent us from hearing the two normal bruits of the heart.

(*To be continued.*)

LECTURES ON OBSTETRICY,

AND

DISEASES OF WOMEN AND CHILDREN,

(*Illustrated with Numerous Plates*).

DELIVERED AT THE MEDICAL SCHOOL, WESTMINSTER DISPENSARY, GERRARD STREET, SOHO SQUARE. SESSION 1836.

By DR. RYAN.

LECTURE XXXI.

Institution and Object of Marriage.

A VAST deal has been written both on the law of marriage and on the duties of married persons. The physiology of marriage has also been recorded in different ways in the Dict. des Sciences Medicales, and recently in a separate work (Physiologie du Marriage-publie. Par M. De Balzac. 1834).

Numerous questions of great importance in a medical point of view belong to this subject. It is on this account that I have attempted an outline in these lectures. The pathology of the genital organs, as regards infecundity,

has been grossly neglected by the profession in this country, and consigned to empirics. Surely it would be better to award it to educated medical practitioners. In discussing this topic, secrets must be revealed at which the false modesty of some ignorant prudes and hypocrites takes alarm. The illustrious Haller well observed "there are no secrets in physiology." Philosophers, naturalists, physiologists, ecclesiastics, and legislators, as well as all classes of mankind, have taken the greatest interest in endeavouring to unravel and comprehend the mysterious function of reproduction. It is the universal theme of conversation among men in all grades and conditions, and the numerous questions relating to it are now matters of frequent notice in the public as well as in the medical journals. Though this is the case, there are a few of these antiquated and hypocritical prudes in the medical profession who are shocked at this part of physiology—men who would not hesitate to slander their brethren, injure their reputation, decry their productions, or rob them on the highway, did they not fear the gallows. They'll not steal one's purse 'tis true, but they'll attempt to rob him of his good name with the most daring impudence. I would ask these men, have they ever perused the works of Aristotle, Harvey, Haller, Spallanzani, Hunter, and a thousand other celebrated physiologists, on the regeneration of the animal and vegetable kingdoms? Are they not aware—and they would be so, if learned or versed in medical literature—that the generation of animals and plants has been investigated by the most virtuous of the medical profession? Do not the world look up to medical practitioners for advice on many points concerning the function in the human species? and, do they not know that the decision of such advisers may affect honour, property, reputation, title, liberty, and life? It is manifest, that if medical practitioners are to be referred to in such cases, they ought to know the received opinions of their profession, which are founded on nature and reason. To obtain this knowledge they must attend lectures or peruse works on the branch of physiology under consideration; but such lectures and works are censured by the short-sighted, ignorant, and prejudiced, who, in their own hearts, are generally much more vicious than those whose duty it is to explain the errors and follies of mankind on the subject of reproduction, and to give its true physiology. An able writer, from whose work I shall freely quote, offers the following reply to such persons:—

"It is conceded that the ideas which most young persons entertain of Love, are both romantic and foolish; and it is not difficult to account why this is the case. Love is, too often, a proscribed topic, either of conversation or advice; all that is known concerning it is, therefore, derived from the fictions of Poetry, and the high wrought descriptions of Novels. Education is employed in directing, controlling, or reforming all the other passions and tempers of the human heart; but on this, it is systematically silent. Can we then wonder that a passion so stimulant, so powerful, so influential, shall, unguided, or misdirected, urge on to error, and to crime, the weak reason, and the generous, unsuspecting nature of youth? That there is a strong prejudice against the discussion of this subject is confessed; and when the peculiar delicacy attending it is considered, we cannot wonder that such a prejudice should exist. Even the most chaste and correct observations concerning it, are apt to give pain; or, at least, to excite alarm in a delicate and pious mind. The delicacy and the difficulty of the subject are confessed; but we ask, is it fit, is it safe, is it not preposterous, is it not ruinous to the best interests of mankind, to leave the whole discussion of it to men of loose and abandoned character? is it wise to leave young persons to derive their notions and feelings on this subject, from the exaggerated, false, and wicked descriptions of it, with which mo-

dern literature abounds? Do not these descriptions daily seduce, mislead, and corrupt thousands of the young, thoughtless, and inexperienced? Is it not infinitely better, then, that we should innovate a little on the opinions, and feelings, and, as we think, prejudices, of the world, and break that mysterious and profound silence, which regards the discussion of this topic, as either indecorous or mischievous?" (Marriage: the Source, Stability, and Perfection of Social Duty and Happiness. By the Rev. H. C. O'Donnoghue, A.M. of St. John's College, Cambridge, and Domestic Chaplain to the Right. Hon. the Earl of Dunraven. London: 1828).

This author farther observes, "nor does he deem it inconsistent with his profession, as a clergyman, to embrace any means or opportunity of giving a right bias to the mind on any subject connected with the morals and welfare of the world."

"Marriage the Author has ever considered as bearing intimately, not only on the happiness of individuals, but also on the prosperity and welfare of communities and states; he believes it to be the source of all industry, subordination, and government, among men. He, therefore, who shall succeed in rendering Marriage a matter of serious consideration, and not blind experiment, will deserve well of society, and cannot offend against delicacy, or religious feeling. On this ground, the Author feels assured that he need offer no further apology, for the humble Publication which now solicits the Reader's approbation."

I would urge these sentiments in support of my endeavour to enlighten medical students and readers, on all the questions which will be submitted to them hereafter for their adjudication.

I have also considered that the influence of the genital function on the health of parents and offspring, and consequently on population, is one of the greatest importance; and under this impression, I have discussed it as freely as my predecessors.

The present is a reading age, in which novelty, interest, and pleasure, are the principal objects of pursuit; and the diffusion of knowledge of all kinds is unprecedented. In this age men and women read, think, discuss, inquire, and judge for themselves. They now require intelligible information from their medical counsellors; and the old system of a shake of the head, a shrug of the shoulders, is no longer tolerated. A thirst for knowledge, and free inquiry, has replaced ignorance and mystery.

I offer this explanation to those ignorant few who are not competent to understand the bearings of the subject which has given rise to these observations. I feel convinced that the profession to which I have the honour to belong, has more influence on the community than any other, and that great good will result both to public health and morals by the diffusion of correct views on the physiology and pathology of marriage. Those who feel shocked at this species of knowledge ought to remember the immense circulation of the most erroneous and beastly productions on the subject, which are calculated to demoralize the people, and contaminate the rising and future generations. Art not the most revolting vices recommended as checks to population? and are not the most immoral works circulated and exposed in almost every bye-street through which we pass? We also read in the daily journals of seductions, abortions, murders, infanticides, adulterous, and many other crimes, all the result of unnatural opinions on the subject under consideration. Many consider it wise to withhold a knowledge most essential to every man and woman's well-being, and most influential on their future lives and those of their offspring. This course is productive of great and incalculable injury. The physiology and pathology of reproduction are as legitimate objects of study as those of respiration, circulation, digestion, innervation, &c.

and have ever been considered by the most eminent physiologists of ancient and modern times.

Marriage was instituted by the Creator in the time of man's primitive innocence, as the means of his happiness, and the perpetuation of his race. The wisdom of its institution has been felt and acknowledged in every age. Man found by experience it was not good for him to be alone, or to lead a life of celibacy or isolated selfishness. Marriage does not, however, restrict its beneficial influence to individuals, but to states and kingdoms. "It is," says Jeremy Taylor, "the mother of the world, and preserves kingdoms, and fills cities, churches, and even heaven itself." It is the primitive source of morals and of society, and offers incalculable securities to governments. It offers matter of important consideration to the statesman, the divine, the jurisconsult, and the physician. It is not proposed to discuss the subject of marriage in all its bearings, in the following pages, but only such parts of it as require the aid of medicine *.

The relations which exist between mankind, arise from the duties of humanity, and take their origin from society.

Of all the social institutions, there is none which exercises so great an influence upon states as marriage. Every state is composed of families, and these are the result of conjugal unions. The prosperity of a nation depends upon the strength and vigour of its inhabitants, and these are powerfully influenced by the comparative perfection of the marriage laws. These again have the most powerful effect on the morals and civilization of society, the rights of persons and property; even sceptres and thrones are alike dependent on them. It was therefore wisely ordained that marriage is a sacred compact, for which those engaging in it forsake their relations and friends. The parties contracting it form the strictest union and nearest relation that can be established between two individuals; their temporal concerns are identical, and consequently marriage is universally considered the source of the greatest comfort and most perfect enjoyment on earth, securing all the advantages of sincere friendship, and the reciprocal offices of true and tender love. The parties entering into this state, vow mutual love, fidelity, and friendship. It was most wisely ordained in the beginning of time, that "a man shall leave his father and mother, and shall cleave to his wife, and they shall be two in one flesh." The only motives that virtue allows, is the selection of an individual of the opposite sex, for the mutual succour necessary in the management of the affairs of life, are the perpetuation of the species, the physical and moral education of children, so that they may enjoy health, and render due homage and reverence to the omnipotent and beneficent Author of the universe †.

Marriage was instituted between the first of the human species, and has ever since been celebrated with a degree of solemnity and importance suitable to its dignity. Marriage is a religious, political, civil, and moral contract of Divine institution, the origin of society, the law for the reproduction of the species, a contract for the transmission of property, a

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* The Qualifications and Disqualifications for Marriage, and its influence on Health and Longevity, are described in my work on Population, Marriage, and Divorce; and all the medico-legal subjects are fully considered in my Manual of Medical Jurisprudence, 2nd. Edit. 1836.

† It is an indispensable obligation on parents to inform and instruct their children by word and example, of the existence, attributes, culture, and love of the Diety; and the greatest care should be taken by them not to allow their children to see, hear, or read any thing that is not virtuous, because early impressions often continue to old age. It is for this reason that children ought to be kept as much from the society of illiterate servants as possible, as their morals and ideas are generally vicious.

guarantee for obligations the most interesting to mankind. It is therefore universally respected.

Man is a social and rational being, deriving his chief of earthly happiness from the delights of society, and the interchange of thought. It is the interchange of the charities and sympathies of life, which gives to human existence its real and only value. Hence, man in a state of solitude, or even isolated luxury or affluence, would be the most pitiable and miserable of creatures.

Exposed to the corroding cares, sorrows, bitter disappointments, and misfortunes of life, man cannot brave alone, and unbefriended, the ingratitude, envy, and malevolence of the world.

"How can the weakness of our nature," says the Rev. H. C. O'Donnoghue, in his admirable work on Marriage, whom I shall have occasion to quote freely, "defy the shafts of calumny, or bear up with unrepining patience, or unshaken fortitude, against the varied calamities of human life, when the contest is to be maintained by an unsupported, solitary being? If the heart mourn over disappointed hope, or be wrung by the pangs of unrequited, or slighted affection; if we pine on the bed of care, for languish on the couch of sickness, who would not desire the sympathy or friendship, and seek to mingle the tears of affection with his own? Who does not desire for his last moments the tenderness of a bosom friend, and the attentions of unpurchased kindness, in preference to those of domestics, however faithful, or attentive? Pitiable, indeed, is he who passes through life

> 'With none to love him, soothe him, or caress,
> To nurse in sickness, or in health to bless;
> Partake his wealth, his poverty to share,
> Crown every joy, and lighten every care.'

"If, on the other hand, our path be strewed with flowers; if the sweet sounds of innocent enjoyment echo through our dwellings; if prosperity amplify our stores; if our corn, and wine, and oil increase; if our families be affectionate, lovely, and prosperous; if we grow in honour, reputation, and esteem; who, we would ask, is so selfish as to indulge in solitary pleasures? Who would not rather augment his own happiness, by communicating its influence, and its delights, to others? and increase his already augmented stores, by imparting of their abundance to some kindred spirit? In this respect, he that scattereth, increaseth: his very joys become amplified, and his sorrows mitigated, by being shared with others: whilst the selfishness of unparticipated good, would only destroy the generous affections of a benevolent heart; or, the hopelessness of unimparted sorrow, destroy its elasticity, and wither even the buds of hope.

"Moreover, how desirable and important it is, to have, on every emergency, a friend, on whose judgment we can rely, and in whose sincerity we can confide, let those testify who have cultivated any acquaintance with the world, its business, or its concerns."

The perfection and sincerity of friendship can only be found in the marriage state, where an identity of interest shuts out all petty jealousies and vexations, and a unity of thought, sentiment, feeling, and conduct, exists. The qualities essential to conjugal happiness are chiefly of a mental or moral nature, and not of merely a physical kind.

"A wise and rational man, therefore, cannot but know that however gratifying to his vanity, may be the possession of fascinating charms and personal beauty, yet that possession is ever very transient, and, most frequently, very unsatisfying; like every thing earthly, it perishes in the using. It may minister to a momentary feeling of satisfaction, that our

wives should be objects of admiration to the world, and should shine pre-eminent in the circles of fashion—but, we seriously ask, is this all that we would desire in them? Are men so infatuated with personal beauty, and a fine appearance, as to forget that there are moral qualities indispensably requisite to a happy union? When the bloom of beauty, and the rose of health, wither before the approach of sickness; when the once sparkling eye becomes dimmed by sorrow; or the easy movements of a graceful form, become paralyzed by disease, where are we to look for comfort, consolation, and delight? The bitter blast will then have swept away all that delighted the eye, or gave pleasure to the mind; leaving nothing for our contemplation, but the wreck of beauty, and the mortifying recollection of departed admiration. Alas!

'How soon the roseate hue may die,
On yonder lovely cheek,
And brilliancy forsake the eye,
That now does all but speak.'

"No man of common sense, it is presumed, can consider personal appearance as the only, or even as an important, consideration, in the choice of one who is to be his fellow traveller, and inseparable companion, throughout this world's weary pilgrimage. To gaze on a fine form, but with a vacant mind, will do little to assuage the bitterness of misfortune, or to support the mind under its pressure. To know that our wives *have been* the toast of fashionable life, and have adorned our prosperity by their grace and beauty, are bitter recollections, when the glory of the one is departed, and the attractions of the other have ceased to delight. But a woman of good sense, sound discretion, elegant mind, cultivated understanding, generous feeling, amiable manners, and good principles, will adorn our prosperity, and console our afflictions; she will rise in our esteem, in proportion as outward considerations detach us from the insincerity and vanity of the world; she will cleave to us with increased emotion, as the servile crowd of our prosperity friends desert us: and, in the evening of life, when the attractions of frail humanity gradually die away, the qualities of her mind, and the affections of her heart, tempered by time, and mellowed by experience, will throw a steady light over our latter days, and gild, with their mild effulgence, our path to 'that bourne whence no traveller returns.'"

A vast deal of prejudice exists in the minds of the unthinking part of the world, against women of high literary and scientific acquirements, who are designated "learned ladies" and "*blues*" by the ignorant of the other sex. Such persons are not partial to women of cultivated minds and of strong understandings, and decline to select them as wives. It is urged, that it is not feminine intellect, understanding, or acquirements, which are obnoxious, but the pride and self-sufficiency which they too often engender, and by which female manners are rendered overbearing, the temper irritable, and the prejudices obstinate.

Against this, it is argued, that when talents are graced with simplicity, with good humour, and feminine modesty, there will seldom be found a husband whose heart they will not delight. When the characteristic gentleness and modesty accompany a cultivated understanding, a polished taste, a good knowledge of the world, and a memory stored with useful and elegant information, female learning ceases to excite apprehension, or to kindle jealousy or rivalship in any bosom. Nay, they increase the sum of human felicity and domestic pleasures.

All men of cultivated mind and understanding, prefer highly educated

women in the selection of wives. They consider that marriage happiness, the most enviable in the world, is best secured by mental endowments, and that marriage misery is the most dreadful of all temporal evils. It does not admit of diminution, intermission, or termination in this world.

The London Medical
AND
Surgical Journal.
Saturday, September 3, 1836.

NECESSITY OF EXCLUDING PARTY FEELINGS AND POLITICS FROM WEEKLY MEDICAL LITERATURE.

The weekly medical literature on the Continent, as well as in England, has been gradually increasing in importance and usefulness for a considerable period. Since its origin amongst ourselves, it has silently, nay almost naturally, become the focus towards which all that was interesting in hospital records, and private case books, has converged. This undoubtedly has been a most important step in the course of science, by giving a facility, not before possessed, of ascending through facts to principles. In 1822 the first attempt at organizing this expeditious and valuable mode of communication was made hesitatingly, in the midst of wonder from some, hostility from others, predictions of failure, jeers, and ridicule from many. The profession itself in a disjointed state, far from anticipating for it a long and useful career, and regarding it as an intrusive experiment, at first received it coldly, questioned its utility, and lastly, disputed its right to instruct. The fruits of such a reception were not good will, but the contrary; sullenness and distrust on the one hand, provoked sarcasm and personality on the other; the war of feelings and of words was begun, and science was associated with passion and party, either as an element of resistance, or as the means of success. The great inconveniences of such an association have been repeatedly felt, and as frequently has the want of some vehicle devoted to science alone been deplored. It is high time to minister to a want so widely felt, and we, therefore, in the commencement of a new volume, cheerfully respond to the call for a journal which shall be untinctured by personalities, and unfettered by partialities.

In numberless instances that have come under our observation, during the period of our labours, medical men estranged from party feelings, and entirely devoted to the duties of their profession, have been deterred from communicating important cases through the medium of the medical journals, for fear of being identified with a section or party in the profession. Much valuable information has been thus lost. In renouncing and disavowing the character of a party organ, *The London Medical and Surgical Journal* will, in future, be conducted on the plan of *The Gazette Medicale de Paris*. Advocating the cause of medical reform, we shall still conceive it our duty to publish statements of abuses or defects prevailing in our public institutions; but in indicating them, we shall refrain from using them as a text for observations of a personal or private nature.

Firmly convinced that the interests of the medical profession will be best promoted by regarding it as one compact and united body, and that the time for laying aside the petty warfare of bickerings and strife is arrived, all our exertions shall be directed to incite our brethren, of every shade of opinion, to labour in the cause of science and of truth, offering to them, for this purpose only, the medium of a faithful and dispassionate press.

Discussions conducted in an acri-

monious tone, have, to a lamentable extent, created dissensions amongst medical men, and marred that feeling of brotherhood and good-will towards one another, which should distinguish the members of a liberal profession.

By this, our profession of faith, we do not, however, mean to exclude medical *news* from our columns; we shall continue to supply the earliest information on all points connected with the profession, confining ourselves to simply communicating such information, without attempting, by any comments of our own, to influence the opinions of our readers respecting them. Our motto henceforth shall be, "SCIENCE IS OF NO PARTY."

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[*From our own Correspondent.*]

THE proceedings of the British Association, held this year at Bristol, have been of an extremely interesting character. The meetings were well attended. There were present, deputations from several Societies in London, and from the Medico-Botanical Society, which consisted of Drs. Sigmond, Johnson, Hancock, and Farre, and Professor Don, of King's College.

On Monday, August 22nd, at 11 o'clock, A.M., the various Sections met:—

Section A.—Mathematics and Physics—President, the Rev. W. Whewell. The following papers were read.—A report on the rock salt lens, by Sir David Brewster. Mr. Lubbock read the report on tide observations; the result of which shewed, that the height of the tide appears to depend on the barometer. Mr. Whewell reported the progress of the Committee appointed to ascertain the relative level of the land and sea, with a view to determine its permanence. The Committee did not come to any practical conclusions, but intended to continue the subject. Mr. Lubbock read a paper proposing new tables for finding the moon's place. Sir W. R. Hamilton reported his investigations of Mr. Jerrard's researches for resolving equations of the fifth and sixth degrees. Professor Phillips read a paper on subterranean temperature. The business of this Section concluded with a paper by the Rev. E. Craig, on polarization; shewing that the phenomena are referable to the impulse, and weakening of the impulse of light.

Section B.—Chemistry and Mineralogy—President, the Rev. Professor Cuming.—Mr. Watson read the results of some experiments to determine the constitution of phosphate of soda. The author exhibited the calcined precipitates of the phosphate of lime which he obtained. Mr. W. Herepath exhibited a new blowpipe—an improvement on the invention of Dr. Hares. The same gentleman read a paper containing an analysis of the waters at Kingsmead, Bath; the temperature of one was 114 deg. F., and that of the other 76 deg., and both contain chiefly iron, magnesia, lime, and soda. Dr. Hare, of Philadelphia, explained an ingenious application of galvanic power to produce, simultaneously, many explosions in blasting rocks, and at such a distance as to ensure safety to the person employed. Mr. Herepath read a paper on an aurora borealis observed by him in November last.

Section C.—Geology and Geography—President, Dr. Buckland.—A paper was read by E. Charlesworth, on the vertebrated animals of the crag; another by J. E. Bowman, Esq., on the bone caves of Cefu, near St. Asaph; and some geographical and geological models were exhibited by Mr. Ibbetson.

Section D.—Botany and Zoology—President, Professor Henslow.—Dr. Richardson commenced the reading of his report on the climate, geography, and zoology of North America. Mr. Rootsey exhibited a living specimen of the aranea aircularia, a spider of an extraordinary size, which is very venomous, dropping into the nests of birds, and inflicting upon them a mortal wound. It was found amongst some logwood, brought from South America. Mr. Rootsey stated the result of his experiments on the mangel worsel, from which he has succeeded in obtaining a sugar of a very nutritious nature, a spirit, and a substance resembling malt. Mr. Hounslow exhibited a crystallized sugar, which had fallen from the upper part of the stamen of the anonendron. Mr. G. Webb Hall read a paper on the means of accelerating the growth of wheat, which depended chiefly upon the soil, and period of sowing sowing of the seed. The business of the Section concluded with some remarks by Dr. Daubeny, on the effects of arsenic on vegetation: he foundthat all, except the liguminous plants, were affected by the sulphuret.

Section E.—Medical Science—President, Dr. Roget.—The first paper read was Dr. O'Beirne's report of the Dublin Committee on the pathology of the nervous system. The Committee have not yet arrived at any conclusions, but intend to pursue the subject. At the House of Industry in Dublin, the number of cases of paralysis was estimated at 150; of chronic insane, 253; of epileptic insane, 54; congenital idiots, 131; epileptic

ditto, 34.—Dr. O'Beirne also read an abstract of an unpublished work on tetanus. The points of discussion which ensued were, what constituted tetanus, and what was merely pseudo-tetanus: Dr. O'Beirne contending that the treatment of cases of the latter kind, as detailed by Wallis, Hetling, King, &c., was not to be received as evidence of the presence of the real disease of tetanus. Dr. O'B. came to the conclusion, that tobacco, used as an injection into the bowels, was an anti-tetanic, removing constipation, and affording great relief. The tobacco was injected by a tube; and it was a question, he thought, whether the good effects resulted from the tobacco, or from the tube. Tetanus, he observed, had been confounded with old cases of rheumatism, but were two distinct diseases. The last paper read was by Sir D. Dickson, of Dublin, on aneurism of the arteria innominata.

Section F.—Statistics—Sir C. Lemon, Bt., President.—The whole of the business of this Section consisted in a lengthy paper by Dr. Cleland, on the statistics of Glasgow; in which some curious facts, in comparison between its former and present state of population, manufactures, commerce, &c., were brought forward.

Section G.—Mechanics—Davies Gilbert, Esq., President.—The subjects brought before this Section were, an essay by Professor Mosely, on certain points connected with the theory of locomotive carriages; and a lecture by J. Russell, Esq., on the application of our knowledge of the phenomena of waves to the improvement of the navigation of canals and shallow rivers.

TUESDAY, AUGUST 23rd.

Section A.—Mr. Russell concluded his paper on the phenomena of waves. Professor Powell read a paper on the determination of the refractive indices for definite rays of the solar spectrum. This was followed by one from Sir David Brewster, on a singular development of polarizing structure in the crystalline lens after death. From his investigations, he has concluded, that there is in the crystalline lens a capability of being developed by the absorption of the aqueous humour; that a perfect structure is produced only when the animal frame is completely formed, and that at the period of decay, the lens changes its density and focal length, and often degenerates into those states called hard and soft cataract. The author concluded by expressing a hope, that these investigations may lead to a means of curing or preventing this distressing disease—cataract. A paper was also read by Mr. M'Gawley, on the application of electro-magnetism to mechanical purposes.

Section B.—The first subject brought before this Section was a paper by Mr. Thos. Exley, on rendering chemistry a mathematical science. The next paper read was one by Dr. Henry, of Manchester, on the power of certain gases to prevent the union of oxygen and hydrogen. Another paper was also read by Mr. W. Herepath, on arsenical poisons. He thought that, from the frequent resort to them for the purposes of destroying life, every new fact respecting their administration, operation, and detection, should be made known. He was not aware that any well-authenticated case had been published, of death having been occasioned by red arsenic, but the Burdock case was one of this kind. It will be remembered, that this unfortunate woman, Mrs. Smith, had been buried fourteen months, and that, upon examination, sulphuret of arsenic (orpiment) was found in the stomach, and the body was partly converted into adpocere. In prosecuting his experiments in this case, he conceived the idea of identifying the poison found, with that sold to the witness Evans by Hobbs the druggist, through the impurity of that which he discovered in the stomach. With this view, he purchased some out of the same box, and requested that it might be of the same kind as that sold to the prisoner's agent. It then transpired, that the box contained the red, white, and yellow sulphurets of arsenic—the two former in lumps, the latter in powder; and that it was the powder of realgar only which had been administered, although it was found as yellow orpiment in the exhumed body. In endeavouring to account for this circumstance, he found that sulphuretted hydrogen and ammonia, which are both evolved in a gaseous state during putrid decomposition, could both convert realgar into orpiment. To remove all doubts on this subject, he injected into the stomach of an animal, a small quantity of the same realgar, and found that, after putrefaction, a change had been produced similar to that of Mrs. Smith. From what transpired, Mr. Herepath was led to the following conclusions:—1st. That ½ oz. of the red sulphuret of arsenic, administered twice, was sufficient to cause death; 2ndly, That realgar is converted into orpiment during putrefaction; and 3rdly, that realgar, like arsenous acid, has a tendency to control putrefaction, and to convert bodies into adipocere. From his experiments he found, that Dr. Wollaston's microscopic system could be made to improve the beautiful reducing process of Dr. Christison, and furnished an excellent method of proving to the Jury the presence of arsenic: and he concluded by stating, that the recent plan of discovering arsenous acid, by converting it into arsenuretted hydrogen, and depositing the arsenical crust during its combustion, was the most elegant, the most convincing, and the most ready of application. The last paper read was one by Dr. Hare, of Philadelphia, on the improvements in the galvanic pile.

Section C.—Mr. Murchison read a paper on the classification of the old slate rocks of Devonshire, with an explanation of the true position of the culm deposits of the central portion of that country; the object of which was to recommend that the slate rocks of the district should be coloured in different shades, and not, as usual, all of one shade; and it also recommended a better classification of rocks. Mr. De la Beche made some observations on the connection of the geological phenomena of Cornwall and Devon, with the mines of those counties.

Section D.—Dr. Richardson continued the reading of his report on the zoology of North America. Mr. J. E. Bowman, F.L.S., read a paper on the mode of ascertaining the age of yew trees, by counting the rings from the centre of the trunk to the bark, each of these denoting a year's growth. Mr. Ball made some remarks on a new species of seal, which he found in the north of Europe, and which comes nearest to *Phoca vitulina*. In the discussion which ensued, Dr. Riley exhibited the stomach of a seal caught in the Severn, containing from 30 to 40 pebbles, which he considered the animal takes in as ballast, according to the depth of the water, when hunting after its prey. Dr. Hancock read a paper on a new and scandent species of *Norantea* or *Ascium*, discovered by him in Guiana. It belongs to the Nat. Ord. *Marcgruiracea*, and is a large bush rope or climber, ascending to the tops of the highest trees, which, by its weight and size, it often brings to the ground. He described the extraordinary bottle-shaped appendages which attend the flower, of a bright scarlet colour, and serving as reservoirs of water. From the wood abundance of pure limpid water flows on its being cut, which the natives use to wash their bodies in certain cutaneous affections. The bark is red, astringent, mucilaginous, and used as a remedy against foul ulcers. The Rev. F. W. Hope read a paper on certain notions of antiquity derived from insects; and the Section concluded with a paper by Mr. G. Webb Hall on the effects of lime variously applied to different soils and different crops, and the quantity most beneficial to vegetation.

Section E.—Dr. Prichard read a paper on the treatment of some diseases of the brain. The author is of opinion, that perhaps all curative attempts in cases of disease of the brain resolve themselves into the modifications which medicine is capable of effecting in the vascular state of parts within the skull: whether any thing beyond promoting either fullness or inanition of the vessels of the brain is in our power, is very uncertain. Bleeding, and those medicines which act by refrigerating or heating the surfaces of the head or other parts, belong to the above-mentioned class. Refrigerant applications to the head have the effect of contracting the calibre of the arteries, and thereby diminishing the quantity of their contents. A similar result (by augmenting the capacity of vessels remote from the head, and causing a greater quantity of blood to be determined into them,) is produced by pediluvia and other means of applying warmth to the extremities. The modus operandi of those remedies producing counter-irritation is very doubtful; and this doubt Dr. P. considers to arise from the obscurity of the subject; but it is probable, he says, that rubefacients, vesicatories, issues, &c., or those remedies which act by counter-irritation, produce their effect by lessening an hypoplethoric state of the vessels in internal parts, and that this is brought to pass by increasing the fullness of the vessels in surfaces to which they are immediately applied. He says, that there is little doubt that external applications which give relief in pneumonia or bronchitis, are most efficacious when applied nearly in juxtaposition with the seat of the disease, and this he thinks goes far towards establishing the notion before alluded to, as to their mode of operation. He says, that as the means within our reach for treating disorders of the encephalon are so circumscribed, it is the more necessary to endeavour to apply in the most efficacious manner, such remedies as we possess. No material improvements, the Doctor thinks, can be made in the ordinary rules for the use of evacuants and depletion; but an important advantage may be gained by counter-irritation. His method of applying counter-irritation in diseases of the brain will appear novel to some, but it has been in constant use, he says, at the Bristol Infirmary, and greatly exceeds in efficacy all other means by which physicians have attempted to relieve diseases of the brain on a similar principle. The application he would recommend is an issue produced either by means of a soft caustic, or by an incision over the scalp. The incision is most frequently made at the sagittal suture, from the summit of the forehead to the occiput. The scalp is divided down to the pericranium. The incision, when caustic is employed, is kept open by the insertion of one, two, and sometimes three rows of peas. The discharge thus occasioned is considerable, and, says Dr. Prichard, it obviously takes place from vessels which communicate very freely with the vessels of the encephalon. This mode of treatment, together with bleeding, he considers the most important of any in those kinds of cerebral disease which are accompanied by usual stupor or dimitriotical sensibility, excluding all affections which are attended by over-excitement, such as maniacal and hysterical diseases; in all cases of which the former methods are for the most part highly injurious. In conclusion, Dr. Prichard detailed a case of amaurosis which had lately fallen under his observation, in a youth of 18 years of age, in which the plan

of treatment before described, together with occasional purgatives, had completely succeeded in removing all symptoms of the disease. At the termination of Dr. P.'s paper, Drs. O'Beirne and Fowler, in discussing on the subject, stated that those methods were entirely new to them; and Dr. Carston, of Liverpool, alluding to the filling or emptying of the vessels of the brain, stated, that if an animal were bled to death, the same quantity of blood would be found in the cranium, and that the doctrine of determination of blood to the head was unfounded, and led to great errors in practice; but counter-irritation for affections of the brain he considered a most invaluable remedy. Dr. Wallis added his testimony to the value of Dr. Prichard's practice, and stated that he had tried it in nearly 100 cases, and in only one did it fail, and that was in a case of delirium, where the patient, by removing the dressings, had, he believed, died from bleeding. He would recommend, that in cases of that description, practitioners should cauterize the ends of the wounds, which would stop the bleeding, and not add to the punishment of the patient, for in so doing, he had found that they would not even lift a hand.

The second paper read, was by Dr. Houston, descriptive of a twin fœtus born without brain, heart, lungs, or liver; the placenta was double, and there were separate membranes and cords for each fœtus. The umbilical vein of the imperfect infant, *totally devoid of valves*, passed to all parts of the body. The arterial system, commencing from the venous capillaries, and gradually running into larger trunks, formed a sort of aorta, like that in fishes, from which the umbilical arteries arose. No communication existed between the arteries and veins, except at the capillaries; so that by whatsoever vessels the blood entered the body, by the same it must have been distributed. A round tumour, which existed in the substance of the cord, outside the umbilicus, had produced effects on the vessels calculated to throw light on the course of the circulation—the vein was varicose from the tumour as far back as the placenta, and the arteries were dilated on the side next the body of the fœtus. Dr. Houston suggested several good reasons in support of his opinion, that the heart of the perfect fœtus can exert very little influence in propelling the blood into the vessels of the imperfect one; and considers that we must look to some other cause than a vis a tergo for the accomplishment of this object.

The last paper read was by R. Carmichael Esq. on tubercles. He commenced with some remarks on the great prevalence of these formations, and then proceeded to detail their appearances according to the descriptions of Laennec and Carswell. Among some objections to the opinions of authors, he urged the inconsistency of representing enlarged cervical glands and pulmonary tubercles as identical, since it is well known that the former may be injected, but not the latter. He allows that scrofulous constitution disposes to tubercles, but only in the same manner as to cancer. He next adverted to the generally recognised connection between scrofula and disordered digestion, and claimed the priority of this observation, by reference to a work which he published in 1810. He then proceeded to argue in favour of the parasitical origin of tubercles, pointed out the absence of vascular communication between these bodies and surrounding parts, and observed, that so long as the former retained their vitality, no inflammation takes place; the author declared his opinion that carcinoma must be arranged among the entozoa, and, having indicated the division of a cancerous formation into a medullary and cartilaginous portion, assigned to the former an independent vitality, the latter being only a barrier which nature sets up against the parasite; and he shewed that the containing cyst belongs to the surrounding tissue. The cartilaginous portion, he stated might be injected, but not so the medullary. Having spoken of a difference between fungus medullaris and fungus hæmatodes, he proposed to arrange the formations which had passed under review, as constituting four species of entozoa—1, tubercles found in the lungs; 2, tubercles found in the abdominal organs; 3, fungus medullaris and fungus hæmatodes; 4, carcinoma.—Mr. Carmichael in conclusion, stated that it was the business of the profession to point out the means of prevention rather than the cure of this disease. Wholesome nourishment, pure air, temperance and exercise, were the great preventives. He remarked on the exemption of the agricultural population from the disease, and on its hereditary nature, and sat down amidst thunders of applause.—Dr. Macartney dissented from Mr. Carmichael on one point: he could not believe that a subject which had independent vitality could come under the power of absorption, which happened in some cases of tubercle. Some other objections were urged, but to all, the learned author replied in a most satisfactory manner.

Section F.—Mr. Kingsley read a paper on the statistics of savings banks. A communication from Baron Dupin was read, on the influence of the prices of corn on population, and the section concluded with a paper by Colonel Sykes, on the utility of co-operating committees of trade and agriculture, in the commercial and manufacturing towns of Great Britain.

Section G.—Mr. Hawkins read a paper entitled "On an improvement on Nepar's rods, for facilitating the multiplication of high numbers, with little liability of error; the invention of J. N. Cossham Esq. of

Bristol."—In the evening Dr. Lardner delivered a lecture on steam communication from Great Britain to India, the methods for the easy accomplishment of which he detailed at full length.

[In noticing the following prizes which are offered by the "British Association for the Advancement of Science," we cannot help expressing our greatest approbation of the manner in which the whole of the proceedings of this influential and learned body have been conducted—on the broadest and most liberal principles, and those calculated to render essential service to the medical profession, as well as all other departments of science.

We regretted much, at the time the "Provincial Association" met, that a different way of proceeding from that which they adopted was not followed. The consequence, as every one contemplated, was the failure, in a great measure, of the attainment of those objects for which the Association was formed. It would scarcely be a surprise or regret, for us to hear that the British Association had rendered the Provincial useless.]

Chemical and Mineralogical Science.

50*l.* for researches on the specific gravity of gases.—Drs. Henry, C. Henry, and Dalton.

15*l.* for researches in the components of atmospheric air.—Dr. Dalton.

30*l.* for researches on the quantity of heat developed in combustion and other chemical combinations.

24*l.* 13*s.* for the publication of tables of chemical contracts.—Professor Johnston.

60*l.* for researches on the strength of iron made with hot and cold blasts.—Messrs. Fairbairn and Hodgkinson.

Zoology and Botany.

25*l.* for experimental observations on the growth of plants under glass, and excluded from air, according to the plans of Mr. Ward. —Professor Henslow.

Medicine.

50*l.* renewed grants to the Committees appointed to investige the subject of the anatomical relations of veins and absorbents.

50*l.* renewal of a grant to the Committees appointed to investigate the subject of the motions and sounds of the heart.

25*l.* for researches into the chemical constitution of the secreting organs.—Drs. Roget, Hodgkin, and Turner, and G. O. Rees, Esq.

25*l.* for investigations into the physiological influence of cold on man and animals in the Arctic regions.—Mr. Richard King.

25*l.* renewed grant for the investigation of the effects of prisons on the animal economy.—Drs. Roupell and Hodgkin.

25*l.* renewed grant for the investigation of the pathology of the brain and nervous system.—Drs. O'Beirne, Green, Macdonald, Messrs. R. Carmichael, Adams, and O. Smith.

25*l.* for the investigation of the physiology of the spinal nerves.—Drs. Harpey and Broughton, and E. Cock, Esq.

The Principles and Practice of Obstetricy, as at present taught. By James Blundell, M.D., Professor of Obstetricy at Guy's Hospital. *To which are added, Notes and Illustrations.* By Thomas Castle, M.D. F.L.S. &c. 8vo. p. 838. London: E. Cox.

(*Second Notice.*)

We can sincerely congratulate the candidate for obstetric fame on being possessed of such a splendid manual as that before us. It is aptly remarked by the indefatigable editor, that "the name of Dr. Blundell is sufficient to give importance and authority to any publication," and we think it no less fortunate that the learned professor should have such a congenial coadjutor; "Arcades ambo," his "Fides Achates primum silici scintillam excudit—Nubrimenta dedit, rapuitque in fomite flammam!"

The work is divided into five parts.

I. The Anatomy of the Female System.

II. The Physiology of the Female System.

III. The Signs and Diseases of Pregnancy.

IV. The Art of Delivery.

V. The After-management of the Peurperal State.

The first, or anatomical part, is illustrated by wood-cuts representing the parts of generation in woman. The second contains the physiology of the female system, with the various opinions from Pythagoras, Empedocles, Hippocrates, Aristotle, downwards: and among the numerous and fanciful theories which he has enumerated on impregnation, we did expect to meet with the Paracelsian process, as described in his first book, "De Natura Rerum," under the title of "Generatio Artificialis Homunculi," which well deserves a place in the cabinet of the curious, for whose gratification we will give a short extract.

"Sed nec generationis homunculorum ullo modo obliviscendum est: est enim hujus rei aliqua veritas, quanquam diu in magna occultatione et secreto hoc habitum sit, et non parvo dubitatio et quastio inter aliquos ex antiquis Philosophis fuerit, an naturæ et arti possibile esset, hominem gigni extra corpus muliebre et matricem naturalem.

"Ad hoc respondeo, quod id arti spagiricæ et naturæ nullo modo repugnet, imo bene possibile sit, ut autem id fiat hoc modo procedendum est: Sperma viri per se in cucurbita sigillata putrefiet summa putrefactione ventris equini per quadraginta dies, aut tamdiu donec incipiat vivere et moveri ac agitari quod facile videri potest; post hoc

tempus aliqno modo homini simile erit, attamen pellucidum et sine corpore. Si jam post hac quotidie arcano sanguinis, caute et prudenter nutriatur et pascatur, et per quadraginta septimanas in perpetuo et æquabili calore ventris equini conservetur, sit inde verus, et vivus infans, habens omnia membra infantis, qui ex muliere natus est, sed longè minor. Hunc nos homunculum vocamus, et is postea eo modo quo alius infans summa diligentia et studio ducandus est."

The third division of the work comprises the Signs and Diseases of Pregnancy, which are described in a manner highly creditable to the author, as a physician and nosologist.

The next in order is the "Art of Delivery," comprehending obstetricy in all its complicated varietes: and here, too, we may fairly admit that our highest commendations must fall very far short of the sterling merit of the work.

The fifth and concluding parts treat of the "After Management of the Puerperal State, the Diseases of Puerperal Women; and Strictures on the Diseases of Infants." Our limited space will not admit of giving such copious extracts as this work really deserves—a work which ought to be sedulously perused by every obstetrician in the kingdom. The language is elegant and classic, the style didactic, clear, yet concise. We must conclude our notice with an extract from his chapter on transfusion.

"The general idea of transfusion, it is probable, has occurred to many in former times: and I am willing to believe that it might not be unthought of by those mighty masters of antiquity, who, first discovering the principles of things, to us who have followed them on the face of our planet, seem to have left only the less splendid honour of exploring these tracts of knowledge which they originally pointed out. It is, however, certainly to modern industry that we are indebted for bringing this operation into notice. Lower, in our own country, and Denys, among the French, towards the middle of the seventeenth century, first demonstrated its practicability by observations on the human body, and experiments on brutes; nor should I deem myself without blame, had I omitted to mention their names. To men of this kind I conceive it is—to men, who not unsuccessfully make it their ambition to contribute discoveries in art and science to the general fund of human knowledge—that an age or country owes in no small degree its lasting splendour. The mass of mankind seem hitherto to have been scarcely capable of distinguishing who are, or are not, their friends. Hemlock, or the cross, has too often been their reward, while the general ear has been wearied with the applauses of those, who, without honest principle, for their own aggrandizement only, have wielded the brute force of the species. But the age for this modish and destructive folly, has, I trust, already begun to pass away. Now that personal interests have vanished, who, among civilized nations, cares, in present times, to applaud a Yenghis, or a Nadir—or any other unprincipled devastator of days gone by—brute favourites of fortune—but scourges of the species, or, if you will allow a bolder figure, the destroying angels of the east. As knowledge steadily advances, these men of mere violence will, I trust, appear before their brethren, the rest of the species, in their true characters: while the names of Socrates, of Plato, of Euclid, of Archimedes—shall I add it—of Timoleon the liberator."

We cannot dismiss this notice without testifying our highest approbation of the manner in which the work is got up. The notes are numerous and judiciously selected: no less creditable to the industry of the editor, than to the talented professor himself.

It has been urged against this work, that it is not so comprehensive as the production of Dr. Burns, and also, that there is a good many extracts made by the editor from Dr. Denman's work. It is farther said, that the celebrated author ought to have written his own work, and not availed himself of the assistance of even so able an editor. Notwithstanding these trivial objections, Dr. Blundell's work is one of standard authority and reference. His fame as an obstetrician is known in all countries; and the result of his practical experience, which is most extensive, will afford many a useful lesson to every one engaged in this branch of surgery. He was the first authority in this kingdom who adopted our terms of obstetrician and obstetricy, which proves his love of classical, as well as medical literature.

PATHOLOGY OF EXPECTORATION.

The expectoration varies considerably in different diseases of the lungs. The sputa sometimes consist of a transparent, limpid, and slightly viscid fluid, of different degrees of consistence, gradually becoming thicker, until it is ultimately changed into an opaque, yellow, or greenish mucous matter, as we observe in catarrh. In some cases the expectoration is of a firm consistence, and so tenacious as to adhere to the vessel in which it is collected, even when this is inverted. In other cases the sputa are tinged with blood, and sometimes assume a dark mahogany colour. Such is their character in pneumonia. Again, the expectoration may be a frothy colourless fluid, containing flocculent shreds, or yellow masses of tubercular or purulent matter, or an opaque whitish substance. These varieties are often observed in the first stage of the development of tubercles. But when tubercles soften and

suppurate, the expectoration increases in quantity, is of a yellowish colour, but may be mixed with different coloured mucosities from the air-cells or bronchial tubes. In such cases the expectoration frequently contains bubbles of air, and presents more or less the character of pus. Such is the expectoration in the last stage of phthisis; but this does not always occur, and an apparently purulent fluid may be secreted in chronic bronchitis, and give rise to the opinion that consumption exists, when the disease is absent. These are the cases which have led some practitioners to conclude that consumption is curable.

The quantity of expectoration is modified by the nature of the disease which gives rise to it, the state of the weather, diet, &c. In some it is brought up with ease, in others with great difficulty, and more appear to vomit it. In croup an adventitious membrane is formed which partially or totally lines the trachea or bronchial tubes, and this is sometimes expelled by coughing or vomiting, either in the form of lamellæ or shreds, or moulded like the finger of a glove. When the sputa are moulded in the small bronchial tubes, they are rounded and resemble small grains, as already noticed.

The expectoration may be pure blood, of a scarlet or dark colour, as in hæmoptysis. When florid, it is supplied by the bronchial mucous membrane; but when the extreme branches of the pulmonary artery give way, and dark-coloured blood is expectorated, or when it proceeds from the air-cells, or intervesicular cellular tissue of the lungs, there is great danger. Phthisical hæmoptysis is arterial and bronchial, and hence so many bronchial ronchi or râles in consumption.

When blood is discharged, from engorgement of the system of the pulmonary artery, it is produced from the ramifications of this artery in the air-cells, and has nothing to do with the bronchial mucous membrane or bronchial arteries. The mucous membrane is supplied with blood from the bronchial arteries, and the air-cells from the pulmonary. When hæmoptysis is caused by the ramifications of the pulmonary artery, the blood escapes into the air-cells, or into the intervesicular cellular tissue that unites where it becomes solidified. That in the cells is of a black colour, and is expectorated. If detained for any time in the cells it coagulates, and is generally black, but may be florid, by the rapid bubbling of air through it. Even arterial blood, effused and retained, may be become black, in consequence of being mixed with mucus, as is observed in the bowels in cases of melæna. When hæmoptysis is bronchial, there will be cough, fever, and constriction of the chest, the discharge florid and scanty, but sometimes copious, even when a small patch of mucous membrane is affected. Such copious discharge is not connected with bronchitis. It therefore follows, that there are two species of hæmoptysis.

When blood is effused into the cellular tissue, it solidifies, presses on the air-cells, and stops the hæmoptysis. Blood cannot pass from the pulmonary artery into the veins, unless it is aerated. Half of one lung may be solidified, and then the blood must be diminished, or it cannot be properly oxygenated. When this happens to some persons, death follows, suddenly or slowly.

When blood is frothy, and coughed up, it comes from the lungs; but when vomited, and mixed with food, it proceeds from the stomach, and is the disease called hæmatemesis.

The expectoration may exhale different odours, and is dark and offensive in gangrene of the lung. It may also be sweet, or saltish, or insipid.

Medical Education.—It appears by a report from the Apothecaries' Society, that 560 students presented themselves for examination during the last year, of whom 450 passed, and 106 were rejected; and of those were 36 for want of knowledge of Latin. Since May 30, 1835, 1200 passed their Latin examination. During the last year, 640 were registered in London, and 322 in the Country—960. This number does not include many intended for the Army, Navy, and East India Company's Service, or who intend to become Doctors in Medicine. The whole medical students in England may be estimated at 1000 or 1200.

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THE

London Medical and Surgical Journal.

No. II. SATURDAY, SEPTEMBER 10. Vol. II.—(1836).

THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE V.

On the Treatment of Strangulated Hernia.

Two principal agents conspire to produce strangulation: first, the elasticity of the aperture; secondly, the changes which arise in the parts which have passed through it. Mere pressure may be and often is insufficient to overcome the opposition which the resistance of the opening affords to the common manual attempts at reduction. We are assured of the dangers attendant on the employment of undue force; these will be noticed with care.

The operation by which the protruded parts are returned, is termed the *taxis*, which means the arrangement of whatever is displaced. It is a valuable plan of treatment. But you must not allow it to obtain too much of your confidence. Having expressed this language of caution, I proceed to speak of the taxis in detail, and there I propose to conclude the present lecture.

The remedies included in the term taxis, are applied externally to the hernia, and are thus far local; or they are employed through the system, and they are therefore so far general. The principal local means are—position, pressure, cold, and heat. For the present, I pass by the consideration of position, as it scarcely admits of any general explanation. Its particular application shall receive the attention it deserves.

The favourers of the taxis repose considerable reliance on the effects of pressure. I will not deny that they often succeed; yet I will contend, that they are generally disappointed in those cases of acute strangulation to which you are to remember my observations are particularly applicable. I never saw any case of hernia in which it was not employed; unless when I have been in the first instance consulted. There are cases in which its use is fully admissible, and it strikes me that such cases are sufficiently pointed out by stating the circumstances in which you should never allow yourselves to indulge in any manual attempt at a restoration of the herniary tumour. Long experience seems to assure me, that pressure is inadmissible when the hernia is painful to the touch, and, above all, where the integuments are red. If there is much thickening of the parts over the tumour, obscuring the sac and its contents, so that you cannot distinguish any thing beneath, you may be assured inflammation involves not only the proper hernial parts, but also the adjoining structures. In such cases pressure is worse than useless. It will be positively injurious. I repeat the caution. I say, when the parts are tense, when they are firm at the apertures, and they become concealed by an increasing depth of parts, the attendants on inflammation, pressure cannot be employed without a certainty of accruing mischief. Further, inflammation is promoted, and the success you might anticipate from a future operation with the knife, is materially frustrated.

Thus far I hope you have learned to recognise those cases in which pressure is none other than an injurious result. A violence is sustained, and time is wanted under circumstances of much disadvantage. Hitherto my observations have been confined to those instances of disease to which I conceive pressure to be

inapplicable. You will allow me now to make a few remarks with respect to the degree in which it should be used, the period during which it should be continued, the manner in which it should be employed, and to notice some other circumstances connected with this part of the operation of the taxis.

I rather think, from the expressions I have heard from the ignorant, as well as from those who spare themselves the trouble of reflecting on what they see, that much value is attached to much force. I am not surprised that such persons arrive at such a conclusion. They have seen examples in which what I may call a high pressure has accomplished reduction. You have seen a case in point, and I am quite aware of the effect it had upon the minds of some amongst you. You saw two men lately in our limited hospital, both had scrotal hernia, and when I could not, as I thought, longer prudently persevere in pressure, both were desired to try methods to which they were accustomed, for the diseases were of long duration, and both were by their own efforts saved from the risk of an operation, for which you looked out with some anxiety. The one man embraced the tumour with both his hands, and he placed all between his thighs, that he might be assisted by their force. The force then exerted must have been considerable indeed. The other, while he was seated on the night-chair, placed his hernia, which was of an unusually large size, in a variety of positions; he closed his thighs, he placed the tumour in his lap, and having then ineffectually kneaded it for twenty minutes, he laid it on the front of the seat; in this position he repeated the same efforts, and with the same success. He then turned round, until he brought the scrotum over the corner of the stool, where he used a measure of violence I should not dare to employ; and then he finally effected what I had despaired of accomplishing. Now, I bring these matters before your minds to show you the grounds on which practical prejudices frequently depend. You say, see how pressure has here answered, and therefore I will imitate a plan I have seen to be successful. But, gentlemen, you are to view these cases in the light of exceptions to almost every general rule which has reference to the taxis. They were cases of chronic strangulation in hernia, of many years standing, and the inferences you may be disposed to deduce from them are wholly inapplicable to those acute forms of disease more immediately under our consideration. Pressure, inadmissible under certain circumstances which have been set before you, may be profitably employed when such circumstances do not exist. The main object of this agent is the reduction of the volume of the protruded parts; for unless this be accomplished, they cannot be returned into the cavity of the abdomen. But this volume cannot be diminished, unless the flatus or the natural contents of the intestine, or the congested fluids, be forced from the situation which we presume them to occupy. We must attribute nothing to condensation. Now, there is only one passage by which the contents can escape from beneath the hand, and that is the aperture of descent. I am aware it may be said that the fluids cannot find an egress through such a channel; but I maintain that they can, and I thus reason:—The constriction exercised by the orifice is the cause of the early symptoms which attend a sudden and acute strangulation. The vomiting, sinking, and anxiety arise from the irritation steadily kept up in the protruded intestines, wrinkled, squeezed, and pinched by the chord with which it is embraced. Its irritability is quickly displayed, and parts associated with it in function, are rapidly drawn into sympathetic consent. As yet the consequences of strangulation are but incipient. In some cases they advance at a hurried pace, but in the greater number of instances they become more evident, and I have many times seen the intestines but little altered from a natural appearance, when previous to operation I was inclined to expect a much greater change. If the stricture be from the first and at once so considerable as to cut off the circulation, the intestine dies instantly, and we then find none of the sequelæ of congestion or inflammation. Of this form of strangulation I have seen but one example. In all other cases of acute strangulation, inflammation has been set up, and of course circulation must have been for some time continued. Now, what I say is this, while the stricture is sufficient to cause the symptoms lately enumerated, and yet not great enough to prevent the circulation, that there is room for the regress of the less solid contents of intestinal protrusion, that this sanguineous congestion, and even the interstitial secretions, are provided with a space through which they may be urged into the cavity of the abdo-

men. If we cannot thus understand the manner in which pressure reduces the size of a herniary volume, I confess I do not comprehend how it is to be explained. But if the solution I have given be satisfactory, it will tend to matters of practical utility, touching the rules which should regulate the application of a means so generally and unsystematically employed. This view of the subject seems also to be calculated to exhibit the value of nicely discriminating between cases which invite the application, and those which refuse the applicability of pressure; while it also, in a way easily intelligible, directs us in the degree, the manner, and the continuance of its use.

If we now hold in our minds the object at which we aim, when we make our manual efforts at reduction, we will see the impropriety of suddenly employing a considerable force; one much inferior to that often heedlessly used will answer all our purposes, and consequences less serious will ensue, should it so happen that the remedy be ill-timed. To disperse the thinner fluids, to unload the congested veins, to transfer serous infiltration, demands no such power as is commonly brought into action. I appeal to what passes before our eyes in external situations. In preputial œdema how easily can we change the position of the fluid, and move it from part to part. In paraphymosis, when the glans penis is greatly swollen, when it is tense with congested fluids, when it is shining and red from accumulated blood, and when we have to contend with an opposing stricture, do we not often find that moderate pressure reduces its size within limits which permit it to repass the circle which restrained the circulation? An excessive force is not only unnecessary, but it is absolutely dangerous. I shall not repeat what I have said as to the certainty of such a formidable result as inflammation. Death may happen. I have seen it occur. It took place in my own practice, and, in a great measure, from my own doing. The case was one of femoral hernia in a man. What is unusual, the tumour was as large as a handball. It moved easily and freely among the superficial structures of the groin. It was thinly covered, and both intestine and omentum were readily perceived to be its contents. I failed in my attempt at reduction, and I requested that another surgeon should be called to assist me in the proceedings which I had in contemplation. A gentleman, of no small eminence, was summoned to my aid. He was in the habit of reposing much reliance on considerable pressure, and he believed the present case to be one in which it would assuredly succeed. His efforts were made with all his strength, and were continued until his hands were quite fatigued. He desisted for some time; and then, grasping the tumour between both his hands, I embraced them with mine. To this conspiring action the hernia in a few minutes yielded. It retired at once, and suddenly. We were pleased at our success. He chuckled at his process; and I admired until I became a convert to a plan of treatment which I soon had awful reason to lament. The symptoms remained unsubdued: in a short period they increased in severity; and, in a few hours, there were evidences of fatal collapse. Before ten hours elapsed the scene was finally closed. The *post mortem* examination explained all that had taken place. The mucous tunic of the intestines had ulcerated in the seat of stricture, and violence had ruptured the peritoneum. The example is exceedingly instructive. It prescribes the fullest caution, while it shows the danger of extravagant pressure.

Moderate pressure is therefore, in my judgment, far preferable to that which is immoderate. But, to secure efficiency, it is requisite that it shall be generally made, equally used, and, above all, that it shall be persevered in with unabated steadiness. What I mean when I say it should be generally applied, is that it should affect the whole of the hernia as far as it is possible to do so. Now, in some instances, we can embrace the whole of the bulk, or, at least, we can nearly do so; and here, of course, there is no difficulty in the business. This facility is often offered to us in scrotal hernia. In other situations the rule cannot be fully complied with, and therefore we must only continue to apply the principle as far as we can. In most cases you must be left to your own judgment; perhaps I may be allowed to say, to your mechanical ingenuity. I shall tell you how I proceed, and I assure you it will give me pleasure to find that my plan is improved by your future experience. I place one hand on the hernia. I embrace as much of it as I can. If it is small and pendulous, I catch it in the hollow of my hand, and I close my fingers towards the cervix. If the magnitude be too large to admit of this, I endeavour to imitate the practice I have mentioned.

The other hand I dispose near the orifice of escape, and, as the tumour pressed on by the one hand rises towards the other, I resist its tendency to spread about the external aperture. I prevent, it may be said, the increase of the diameter near the neck of the hernia, and then, I presume, I assist to give to the inferior pressure a direction which it otherwise might not take, while I mould the parts into a condition favourable to return. My first pressure is very slight. I gradually increase it; but I never carry it so far as to induce pain. No matter with what caution I proceed, I sometimes exceed what I think right. This is unavoidable. I correct the error as soon as I find I have fallen into it. I frequently appeal to the sensations of my patient. When there is complaint of pain I abate the force, but I do not discontinue its use. I employ it to an amount that is not distressing; and I persevere at that rate until I give over from uneasiness or from success. Half an hour is almost the mean duration of my efforts. I am then compelled to relax them: but I soon renew them, and I do not despair until after many cautious and well-continued trials.

We hear much of the direction in which pressure should be used, and many rules are given upon the subject. Most of these refer to particular cases. I am not therefore disposed to engage in the consideration of them at present. There is one rule, however, which is equally applicable to all herniæ wherever situated. It is this; when the parts deviate from the direction they observed in their escape, you must bring them as far as you can opposite to it, and maintain them there during your manual exertions. To accomplish this, you will sometimes be obliged to lift the hernia upwards; in other cases you must pull the hernial parts downwards; again, it may be necessary to draw them inwards; and, in a fourth instance, an outward position may be well calculated to forward the object you have in view.

On the subject of pressure, I do not find I have any further observation to make at present; so that I shall pass on, and communicate to you all my experience dictates as to topical applications, cold and heat. The former of these remedies is in general use. It is employed in various degrees and ways. Water at its common temperature I have seen frequently applied, and sometimes, although not frequently, with advantage. It is often used as low as the freezing point, and by different contrivances at an intermediate degree.—Ice is laid over the tumour and evaporating fluids are used when it cannot be procured. The former is laid on in bladders, and the latter by means of cloths, which are removed as fast as they grow dry, or become warm. Water is used in the same manner, but sometimes it is dashed upon the tumour, and of course on much of the abdomen of the patient. I have often directed a continued stream upon the tumour, and I must say, with effects which may encourage confidence in such a plan of proceeding. I will not trouble you with any account of the origin of their practice, nor shall I now attempt an estimate of its value. If you read you will find no small variety in opinion upon the subject. The different opinions I may yet presume to reconcile. But just now I am more disposed to examine the manner in which cold acts as a reductive auxilliary, but more especially the cases to which the recollection of my practice informs me it is applicable. The question as to the manner of action may appear to you one more pleasing to a speculative mind then useful to a practical view, and so perhaps it is. But we cannot always stop the impulse of inquiry. As often as I have seen the application of cold successful, I have endeavoured to explain the manner of its action. Without pretending to have arrived at a satisfactory solution, I will briefly explain the view I have taken of the matter. Cold, remedially applied as it is here, reduces the temperature of the heat, drives the blood from the smaller vessels placed within the sphere of its action, and in this way causes a diminution in size. We know that it promotes the contractility of the integuments, at the same time opposing the distention of the capillaries, and exercising a compression on such yielding structures as lie immediately beneath it. By these powers, cold resists inflammation, and promotes its removal. But in the present instance it seems to possess a virtue beyond these. Some value may be attached to the more mechanical effects of construction. It is general, it is equable, and it is steadily maintained. Yet I cannot allow myself to attribute its salutary influence in the reduction of hernia to their contractile agency alone. We have here evidence, that cold in the degree in which it is here displayed, has any other direct influence over parts at a distance from the surface, than that of

increasing congestion, not, however, in any other parts, than those which invest the protracted viscera, for you already understand a vascular immediate connection does not exist between the prolapsed bowel and those parts which surround it, and consequently the presumed congestion cannot extend to the former. It has been supposed by some, that cold applied without may act on the fluids and flatus contained within, such persons reason vaguely, or rather, do not reason at all. They speak of cold condensing air and of its emptying vessels. But they are ignorant of the heat preserving power of the living body, and they remain satisfied with an opinion, which facts superficially examined are more calculated to confirm them to disturb. We shall leave them in their innocent illusion; while they dream, let it be our business to think, and to enquire at other sources a solution of a point which they imperfectly explained.

Between the surface of the body and the abdominal viscera there is a sympathy which nature has established; cold or wet in parts, even so remote as the feet, will excite colic, and give rise to dysentery or diarrhœa. Cold to the abdomen will awaken uterine contraction, and arrest uterine hemorrhage; the mere pediluvium will often relieve much abdominal distress, and the virtues of fomentation and baths, are universally acknowledged. These are familiar examples; I adduce them to remind you of a consent, which in spite of your personal experience, I can conceive you to overlook. The chain by which their harmony is secured, we cannot see; the part is ours; nor does our inability to explain how it arises take any thing from its practical value. Now it is to this sympathy, I principally refer, whatever beneficial consequences issue from the application of cold as an agent auxilliary of the taxis. By an indirect operation, cold may delay the current from the heart; it may promote the current towards it. Thus the agents of interstitial absorption may be excited into activity, and even flatus may be removed, until the protruded parts shall be reduced within a diameter admitting of their return. In these suppositions, I confess I do not see much that is conjectural; we reason that when cold is externally applied in disease, and I do not see why we should not avail ourselves of the same solution in the present circumstance; but there are other agents whose power appear to me adequate to produce no inconsiderable effect, at least in some instances, and whose influence is brought into action by a more general application of cold. In many cases of large chronic hernia in a state of strangulation, I have succeeded in the midst of despair by the following proceeding. I have taken the patient from his bed and laid him naked on the floor; I have then dashed the tumour, and of course the abdomen, with bucket after bucket of cold water; I have continued this treatment as long as the respiration was affected, and until the patient began to grow debilitated by its use. The hernia has often yielded before these means; I do not say more of such a course at present than that it is one which in certain cases may be adopted with advantage. During this process, there is a succession of short and sudden inspirations. If you have ever waded slowly into a depth of water, you have experienced the kind of respiration of which I speak. During the impression of cold thus applied, the ribs are unusually elevated, the diaphragm appears to discend less than in common, the abdominal muscles become tense, and as it were drawn backwards. In this apparent convulsion, there is a traction of the intestinal canal. This fact is strikingly illustrated in the prolapsus ani of young persons, when the disease is not considerable in degree, and of no long duration. I have often seen a sudden reduction accomplished by throwing a vessel of cold water on the loins; this surely must depend on some contraction of the intestine by which its length is diminished, its diameter narrowed, or perhaps both changed, at one and the same time are effected. The means of procuring depressed temperatures are now well understood. I must not therefore trouble you with any formulæ for this production, evaporating lotions are inferior in value, and the most powerful are extensive in use. Of astringent applications I have no opportunity of specially speaking from any experiment.

Here, we seldom employ heat as a topical application. I do not know why this is the case, but, as long as I remember, confidence has never been reposed in its power; yet the testimonials in its favour are neither mean nor few. If it succeeds, I cannot understand the principle upon which it does so;—but this is no argument. The facts, as reported, must be allowed their weight, and are sufficient to silence any reasoning

which my ignorance could suggest. Heat, in the form of a bath, is decidedly sometimes serviceable; its general use declares the estimation in which it is held: yet, weighing it in the scale of my personal experience, I cannot pronounce a commendatory opinion. I have said it is sometimes serviceable; I have attributed success to its use; but I have been most frequently disappointed by its failure. Indeed, all remedies prescribed without discrimination, fall under the same remark. No doubt, every practice that is not absolutely injurious, may be fairly tried before we call upon our last resource. This is a prevailing axiom; accordingly you will find that ignorance and its opposite followed in the same path; a routine practice is adopted, means are crowded upon means in an ill-judged succession, until the whole series is gone through; and this, as I know to be the case, without any consideration for the time unprofitably and injuriously expended, without any calculation as to the progress which the disease may in the mean time make, and without any reference to the suitableness of this or the other plan of treatment, to the duration of the disease, the stage in which it exists, or the severity of the accompanying symptoms. If there are no data to guide discrimination, let us adopt the axiom to which I have alluded, and let us pursue the principle to the fullest extent. But, I say, these are beacons by which the judgment can be directed, and by which we can distinguish cases in which we may reasonably expect to succeed, from those in which all means of taxis must inevitably fail.

I have never known the warm or hot bath to be followed by the reduction of a strangulated hernia. When strangulation quickly followed what is called a sudden appearance of the disease, or a sudden increase from a small to a larger, and yet an inconsiderable size, whenever the parts were extremely tense, elastic, painful, red—but, above all, if there was much unyielding hardness in the immediate circumference of the orifice of descent, accompanied with inflammatory engagement of the cavity of the abdomen, such cases as these admonish us to follow a more decided course, by suggesting operation. And yet, in these demanding circumstances, how often have I seen the day consumed in fruitless trials, and the evening reserved for operative action. How often have I known the night to be passed in a continued use and repetition of means for which an operation was at last substituted, and which its prompt performance ought to have been anticipated.

The approved temperature of the bath varies from 100 to 110 degrees. It is a general bath, and it is most successfully used when it produces weakness amounting to syncope. During this period of collapse pressure is to be resumed and persevered in as long as the condition of the patient will permit. If faintness be considerable, he must be removed to bed, and then the manual efforts may be renewed.

In the effects produced we have evidence of the relaxing power of the bath; the circulation is performed quickly and weakly; the face and exposed parts of the body are covered with a profuse perspiration; the stomach grows sick; vomiting is sometimes promoted; vision grows indistinct, and the powers of the muscular system are subdued to perfect inaction. This is the time presumed to be most favourable for our efforts; and the reading is, that it is so, because the muscular system can no longer antagonise any force we employ with the view to reduction. Now this seems plain enough; but let us see whether we exactly understand what is meant by the non-resistance of the abdominal and other respiratory muscles, which I have already said to be particularly favourable to the reduction of hernia. This desirable passiveness attends the debility which the hot bath induces; and I can conceive, that during its continuance the elastic compression exercised by the margins of the several apertures of escape, shall also be abated. While the person is being immersed, topical and more general abdominal uneasiness subside, and the sympathies which they usually produce are less urgent. From the general expression of the surface of the body we may assume that the circulating fluids are directed towards its periphery, internal congestion is thus diminished, the parts protruded lose in their proportion, and in this way, their size being decreased, their return may be facilitated. But it may be said that this supposed alteration in vascular plenitude of the viscera concerned must be very inconsiderable. I concede it to be so; and yet I can imagine that it contributes to reducibility. In my opinion, this is not a vain supposition; I think it has observation for its support, and that observation derived from cases in which I have been personally concerned. I have

endeavoured to ascertain the smallest extent to which it is necessary to divide the aperture of stricture, and I have often been astonished at the perfect liberty which was obtained by the least incision I could perform.

I feel that I have exceeded the limits I had prescribed to myself in considering the topical means directed to the reduction of strangulated hernia; I allowed my remarks to embrace some of the general effects of cold and heat. This voluntary indulgence was, no doubt, a breach of method, excusable, I am led to hope, as it is free from the chance of embarrassing the understanding.

LECTURES ON OBSTETRICY,

AND

DISEASES OF WOMEN AND CHILDREN,

(Illustrated with numerous Plates,)

Delivered at the Medical School, Westminster Dispensary, Gerrard-street, Soho-square. Session 1836.

By DR. RYAN.

LECTURE XXXII.

Happiness and Unhappiness of the Marriage State.

But of all temporal evils, an unhappy, marriage is the greatest. It is the source of confusion, misery, and vice, of a bad education of children, of bad citizens, of a violation of every duty.* No one, therefore, ought to engage in this contract without the most mature deliberation and a virtuous intention.

One marries for love or sensual gratification, which he imagines will be perpetual; but this passion is soon subdued or extinguished if founded on beauty or other fading qualities. Another embraces this state for fortune, splendour, title, and so on; and he, too, will in general be disappointed. Most persons expect happiness, pleasure, wealth, &c.; but disappointment is the commonest result. Marriage, unless based on religion, virtue, and nature, is seldom happy.

Unsuitable marriages among persons of different ranks cause dissensions among families, and are generally unfortunate. Persons generally prefer individuals of their own age, disposition, rank, and fortune; though, from worldly motives there are exceptions.

Nothing is more dangerous than great contrasts,—than, to use the words of the poet, "the union of January and May." A masculine woman disgusts a man who compares her to himself. In like manner, an effeminate man, in place of being preferred by women, is despised. The best mode of establishing ardent love between the sexes is, that the woman should be feminine and the man virile. If all conjugal unions were assorted after the dictates of nature, or the secret instinct of sympathy, nothing could, without doubt, be more delicious and lasting than the bonds of hymen. By these well-assorted, natural proportions, both sexes become certainly better and more perfect; the mutual abandonment of one to the other forms one being in two bodies, it doubles the sentiments and life, cares are lessened by participation, and pleasures are rendered more vivid and exquisite.

A husband or wife who is virtuous, prudent, and well-informed, will be the greatest comfort, support, and treasure.

The chief characteristics of a good husband or wife are piety, love, meekness, reasonableness, application to duties, and a love of home, "sweet home."

It is not easy to find such individuals. Sir John More, inculcating this doctrine to his son Sir Thomas, the celebrated chancellor, and compared a man going to marry to one who was about to put his hand into a sack in which were ninety-nine serpents and one eel; the moral of which comparison is, that there are 99 chances to 1 against a fortunate selection. He might have urged, with much more reason and sense, that a thousand times more chances were against the female sex. Man has more acquaintance with the world, and is, I am convinced, infinitely more depraved than woman.

A good husband or wife is rarely found in highly civilized countries. The reason is apparent, because few strictly follow or adopt the divine precepts of Christianity.

According to these marriage is a holy and inviolable union, an honourable alliance, a sweet society maintained with constancy, mutual confidence, a continual chain of good offices and duties mutually paid, a reciprocity of chaste affections, perfect friendship, will, inclinations, interests, and goods. The principal obligations of the parties are love, fidelity, the healthful propogation and proper education of children, and constant care of temporal affairs.

The first duties of the married state

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* Fœcunda culpæ secula nuptias
Primum inquinavere et genus et domos;
Hoc fonte derivata clades
In patriam populumque fluxit.

are mutual love and affection. This state is the closest alliance and union in hearts, bodies, and concerns.

Mutual fidelity and continency are the second great conjugal duty which those entering into matrimony vow before their Creator. A marriage, without mutual love, is the most unfortunate; for a perpetual cohabitation with one whose person and conversation are disagreeable, and who is an object of aversion, conjoined with the thought that a divorce only or death can be the deliverance, renders such a union much more uneasy than can be expressed or described.

All a person's imperfections, capricious temper, vanity, folly, &c., appear in the married state. The demeanour towards the world is agreeable and obliging; but, in domestic life, the mask is torn off, and an individual appears such as he or she really is. Hence it is incredible how much a wife has to bear from a husband who is capricious, haughty, choleric, dyspeptic, and intracticable; or what a sensible husband has to endure from a silly, unreasonable, and intracticable wife.

It is difficult for married persons to acquire each other's tastes, feelings, and opinions. Patience is an indispensable virtue to this state. No one is free from imperfections, both of mind and body: and both husband and wife will have to bear with, and often to forgive, each other.

Unhappy marriages are seldom fecund, and hence opposed to the increase of population, and the recommendation "increase and multiply."

The end of marriage is the propogation and education of children, and bringing them up with piety and virtue, so as to be dutiful to parents and good citizens. The second end is affording mutual society and comfort in the various transactions of life.

Every prudent individual becomes acquainted with the disposition of the woman whom he thinks worthy to be his companion for life, and the mother of his offspring. Hence love at first sight, and ball-room matches are, usually, sources of endless misery: they are formed without consideration, and have their origin in a transient feeling.

"True love," says the author on Marriage, "is founded on esteem. A captious, peevish spirit; a mind full of suspicions, and easy of offence; a temper sour, fretful, passionate; ever on the watch to find fault, and to express dissatisfaction; which no attentions can satisfy, and no efforts please; rude in its language, scornful in its expressions, and unreasonable in its requisitions, treating the old with disrespect, and the young with hauteur:—these are blights and deformities of character, for which no other qualities adequately can atone or compensate.

"Nor is it only the *quality*, but the *general similarity* of temper which must be regarded. Where strong affection prevails, a spirit of accommodation will prevail also. But it is not desirable that the spirit of accommodation should be subjected to very frequent, or very rigorous experiments.

"Should the wife, unfortunately, be allied to a husband of irreligious character, it is incredible how powerfully his heart may be won over to the love of christianity by the gentle and peaceable demeanour of his wife; whose virtuous deportment, suavity of manners, and diligence in duty, united with humility and unobtrusiveness, cannot fail to render her both respected and beloved; whilst they forcibly recommend, and beautifully illustrate, the loveliness and the influence of that religion which produces effects so holy, excellent, and attractive. Thus may the unbelieving husband 'be won by the conversation of the wife, beholding her chaste conversation coupled with fear.'

"A fretful temper is its own tormentor, but it is also a tormentor to every one around, and to none more than to the husband, or the wife, who may be exposed to its influence. No day, no hour is secure. No incident is so trifling, but it may be wrought up into a family disturbance. If it be commanded that 'all bitterness, and wrath, and anger, and clamour be put away,' surely the injunction has an increased obligation on those whose interest, as well as duty it is, to obey it."

The cares of married life are undoubtedly many. The husband and wife are not solitary individuals. In their welfare are bound up the comfort and well-being of many dearer to them than their own individual comfort. In them is centred the hope, and on them rest the confidence, the prosperity, and happiness of family and friends. Exposed to the daily mortifications, disappointments, and perplexities of the world, it is not marvellous if care clouds their brow, or anxiety wounds their hearts, and, therefore, their sorrows are numerous. They have their many conflicts with the troubles of this world; they have their corroding cares, sleepless nights, and anxious days; sick-

loss will invade their dwelling. But, it may be asked, is celibacy always "a life of single-blessedness?" have the unmarried no cares, no sickness, or no wants? and if they can plead no prescriptive right of exemption from the common lot of man, upon what bosom can they pillow an aching heart, or into what ear whisper their many sorrows; what friend will sympathise, with cordial disinterestedness, in all their varied woes?

The marriage union is the most important of any we are capable of forming in this life, and not our own happiness alone, but that of others also, which is affected by our conduct in it. It is a union, not merely constituted with a view to the reciprocal benefit of the two individuals who contract to form it, but exercising likewise a paramount influence on the manners and happiness of society at large. It is, therefore, a matter of the deepest importance that the duties and obligations of our domestic and social relations should be accurately defined, and duly impressed on the hearts and consciences of mankind. It is on a due understanding, and a faithful discharge of these duties, that the happiness of the parties themselves, and the prosperity and welfare of the present and future generations depends.

It is for these reasons that marriage is an indissoluble contract, which cannot be broken on account of caprice, interest, or other motives. Were it a civil contract only, men would be at liberty to part with their wives as they would with their cattle, and encouragement would be given to vice, immorality, and domestic disunion.

"Let us also contemplate how seriously such a state of things must operate on the well being and comforts of the innocent children. Deprived of a father's support, or a mother's care; abandoned, in all probability, to the care of servants; destitute of education; children would then be left to the mercy of the world; to the supplies of accident; to the charity of the street; to the bleak and desolate waste; to the frozen hospital; to the inclemencies of the sky; to pine with hunger; to chill with nakedness; to linger with disease; and to droop with unkindness. Unrestrained by moral or religious considerations, it is to be presumed that they would follow, with too true a zeal, the vicious course pursued by their guilty parents. The limits of virtue and vice would become undistinguished; and the respectability, stability, and honour of character which married life confers on individuals, would be henceforth sought in vain. The guilt of the parents would thus find its consummation and its punishment in the profligacy, dishonour, and misery of their degraded and wretched offspring."—*Op. Cit.*

When individuals are aware that the situation in which they are placed is only terminable by death, they are obliged to bear with patience the troubles and vexations of domestic life—and this is in most cases a wise ordination. As a civil contract, the parties are at liberty to choose and to deliberate as to their future connexion; it leaves to their own discretion the time, circumstances, prudence, and propriety of their union. But when once that union has taken place, no earthly power possesses the right to suspend, or to dissolve it, on grounds of mere *convenience, caprice,* or *pleasure.* According to our laws, marriage may be dissolved on the grounds of adultery, or cruelty on the part of the husband; and divorce is considered an admirable palliative for the evils of conjugal life. It may, however, be as fairly considered an encouragement to conjugal infidelity and immorality. Were divorces generally obtainable, which they are not, on account of the great expense attending them in this country, society would fall into disunion, disorder, and crime, licentiousness would be general, and the world exhibit one mass of infamy and misery. Ample proofs of this conclusion are adduced in the remarks on polygamy in another part of these lectures. There is something unnatural and inferior to brutality in a parent who deserts his or her offspring. No attachment is so strong, no tenderness is so great, as that which is originated and cherished by marriage; and when this is violated by adultery, or elopement, it never can be revived, and a subsequent union is unhappy, as many recent examples too amply testify. A man must be a bad judge of human nature, if he supposes that the wife of his neighbour, whom he seduces, will be more faithful to him than to the man she has dishonoured. Nevertheless, we daily observe persons in the higher ranks forming marriages of this kind, and in general deserting and rendering miserable the victim of their unhallowed passion.

"Men," says the eloquent author of Marriage, "may, and do, violate the sanctity of the marriage vow; ruin unsuspecting girls, whom they have first deceived by promises, which they are

neither able nor willing to fulfil; destroy the comfort, the respectability, the welfare, and the happiness, of innocent families, by the seduction of the female parent; and yet these very men pass in society as respectable persons; are associated, by common assent, with our virtuous daughters, and modest matrons; and find a ready admittance into good society. Can it be a matter of surprise that such evils as we have glanced at, should disgrace and degrade, injure and afflict society, so long as that society upholds and sanctions the vile adulterer, and purse-proud profligate?

"As Christian moralists, we must denounce that perversion of feeling which would apologise, extenuate, or soften down the criminality of men, whilst its whole weight of severity falls on the weaker sex. In our view, the duty of both is equally plain, and equally binding: and be the offenders of what sex they may, they equally sin against conscience, the obligations of their own vows, and the conditions of their own happiness.—A man of virtue will be not only virtuous himself, but the friend of virtue also. He will honour his wife, and show his regard to decency and morals, by refusing his friendship and acquaintance to those who bring contempt on virtuous love; and outrage decency by their vice, and disgrace marriage by their easy virtue.

"To those who are unacquainted with the accommodating morality of High, or, as it is called, Fashionable life, the moral distinctions and considerations which prevail in it, would be incomprehensible and mysterious. A cast-off mistress, if she be of the privileged order, receives the respect which less initiated persons would infer, to be the homage paid to virtue and decorum: and it must be remembered that this equilization of virtue and vice, this insult to morality, this patrocination of depravity in manners and morals, is generally sanctioned by married ladies, who consider themselves, in virtue of their married state, as exempted from what they contemptuously term, the precise strictness of old maids.

"Could the guilt, the folly, the vanity, the extravagance, the shamelessness, the frivolity, the heartlessness, the utter degeneracy of fashionable life be laid open; could the pen of truth depict it in all its debasement and iniquity; could we penetrate into the various recesses of this mystery of iniquity; then would it be found that the orgies of Bacchus, or the impurities of the Corybantic Festivals, never reflected a deeper or a more degrading stigma on the virtue of Roman morals, than the arena of fashionable life in London, does on the conduct and opinions of our nobility and gentry."

Marriage is a fairy land—the land of promise; but what constitutes its felicity is to many, if not to most, an indistinct and undefinable question: the universal consent of mankind has pronounced it good and salutary; it is the hope of many who can assign no definite reason or motive for its indulgence.

The motives which influence the majority of the world in contracting marriages are unfortunately too often selfish and false, such as ambition, wealth, rank, title, interest, a love of independence and an establishment, a desire to escape restraint, anger, and a wish to disinherit relations, disdain for a faithless lover or mistress, necessity, obligation, passion, imitation, and very rarely the only good motive, pure affection or virtuous love; such unions are seldom happy.

"Mercenary considerations, in many instances, lead to the contracting of this holy union. How often is the decrepitude of age with a large estate, and a handsome settlement, preferred to the manly vigour of youth, and to virtuous conduct when unconnected with a weighty purse? How frequently is the titled libertine a more favoured lover than the virtuous commoner? Nay, have we not, in our own day, seen the glitter of a coronet by its false glare rendering mental imbecility, and depraved passions considerations of no consequence, compared with the attainment of high rank and ample fortune?

"Nor can we censure too severely that levity, inconstancy, and duplicity with which men act in the violation of the most solemn engagements, when, having won the heart and the affections of a deserving and amiable, though portionless, female, and disregarding all their vows and protestations, they lead a wealthier, though often a less deserving bride to the altar. Honour, feeling, and religion alike proclaim the infamy of the act, and the heartlessness of the wretch who can thus traffic in the most sacred engagements, with all the coolness of mercenary consideration.

"If the distinctions of rank, or the adventitious circumstances of fortune, could shut out the oppressive cares of life; if the pride and pomp of worldly distinction could lull the pains of disease; if

the splendour of high life could shed one gleam of hope over a dying pillow, or dispel the gloom which broods over 'the house appointed for all living;' if, in fact, human calamity and suffering could be averted by the sacrifice of feeling, affection, and honour, at the shrine of human vanity and human greatness; then, indeed, but not otherwise, would we extend forgiveness to the guilty trafficker.

"Less criminal, because less selfish and mercenary, though equally foolish, is the importance attached, by many, to personal charms. Sickness, we know, will dim the lustre of the brightest eye, and wither the loveliest flower. The hue of health, and the bloom of youthful vigour will, alike, fade before the noxious breath of sickness and disease. The verdure of spring, and the gaiety of summer must be succeeded by less pleasing seasons; but each season, to a pious and well regulated mind, offers its appropriate charms. If the flowers of spring, and the fruits of summer cannot continue in unfading beauty and richness, so neither can the graces of beauty, and the loveliness of youth.

"But it may be asked, are we then to woo poverty, and to wed deformity. By no means. We do not disparage rank, and wealth, and beauty, and outward grace; we allow them to be valuable, and even desirable blessings; but we pronounce them to be, of themselves, unconnected with those gifts and graces which no adversity can destroy, nor lapse of time corrupt, most unsatisfying blessings, and miserable comforters. We are not such stoics as to exclude all reference to personal appearance, or pecuniary circumstances; we give them their full weight in our decision; and that weight is, by no means, trifling—but, after all, we consider these things as of very inferior and secondary moment.

"Were we to live always, or even generally, in public; were the ball-room our residence, and the scene of our daily duties; were we to be happy, only in proportion as we secured public applause and admiration, then, indeed, we might be justified in our own conscience and in the opinion of the world, for expending all our care and concern on the dazzling pomps and vanities of life, and for making them the chief objects of our solicitude in our matrimonial alliances. But let us seriously inquire, how far does truth justify such a supposition? Do not the sober and important duties which attach to us as husbands, wives, and parents, require that we should renounce, to a very considerable extent, the giddy pleasures, and the tumultuous joys, of public life? As rational beings, as heads of families, as men pledged to the performance of important and solemn duties, HOME ought to be the centre to which our thoughts, our affections, and our desires should ever turn. HOME is the seat of man's truest pleasure, as it is the sphere of his most important duties. The qualities which shed their kindliest influence over the domestic circle,

> Where all the tumult of a guilty world,
> Tost by ungenerous passions, sinks away,

are those alone which should attract the esteem, and conciliate the regard, and secure the affection, of a rational and sober minded man."

"Let us," says Gisborne, "consider the case of two persons, of unequal tempers and dissimilar habits, about to form an engagement for life, by which their whole future existence might be affected; what repugnance, on reflection, would they not mutually feel to such an engagement—especially if one of the parties was to be in a state of subordination to the other. How diversified, how strict, how persevering would be the enquiries of each respecting the other? Unless the dispositions, the temper, the habits, the genuine character, and the innermost principles were mutually known, what rational hope, what tolerable chance of happiness could subsist?"

There are far more important requisites for marriage than temper and accomplishments, and these are principles and habits. Without attention to these, every promise of happiness will be infallibly blighted.

"On what solid ground can a woman anticipate happiness for life, when she confides her person and her property to one on whom the laws of God have no influence? Are the proud, the covetous, the ambitious, the malignant, the censorious, the worldly minded, the lovers of pleasures more than lovers of God, likely to be the indulgent husband, the fond father, the kind master? Can he who habitually violates the precepts of the gospel, and lives in utter neglect of its authority, be reasonably expected to discharge the duties he owes to man, with more integrity than he manifests to heaven? Let it also be remembered that he who is not under the habitual influence of christian principles, and conscientious as to its practical duties, is likely to have

an unhappy and pernicious influence on the principles, conduct, and happiness of his wife. He who disowns, or neglects the duties of the station he now occupies, has no pledge to offer to his bride that he will more conscientiously respect the obligations of the new relations of life into which he is about to enter.

"Thus it is in life. An amiable temper, sound judgment, good sense, a well-informed mind, correct taste, religious principles, united with the lighter accomplishments of a well-educated mind, and blended with mildness of manner, and gentleness of heart, will be found the substantial qualities which cannot fail to win the affection, and secure the heart. These constitute the essential qualities

> Of fellowship, fit to participate
> All rational delight.

"Add to these a moderate share in the gifts of fortune, and the most boundless wishes of the human mind must receive their complete gratification and fulfilment: but without the more enduring qualities of heart and mind, the favourites of fortune cannot enjoy happiness themselves, nor confer it on others.

"Whilst, however, we condemn, with a just and severe reprobation, the folly and guilt of those who sacrifice honour, and the best affections of the human heart, on the altar of Mammon, we must not be supposed to overlook, or to undervalue, the dictates of prudence. Love marriages, as they are called, usually terminate in bitter disappointment; the claims of a young and increasing family will eventually force themselves on the attention of the parents, and, it is to be feared, that the vulgar considerations of discharging bills and meeting family expenses, will prove a fruitful source of those bickerings and disagreements which too plainly show the incautious folly and heedless imprudence with which their union was formed—Love cannot clothe, educate, or maintain a family, nor yet satisfy the importunity of a distressed, or an impatient creditor.—We would temper the ardour of passion by the sobriety of reason; and bring the affections of the heart under the control of prudence and discretion."

Judicious and virtuous parents are bound to interpose their authority when there is danger of improvident alliances, and ought to point out the impropriety and inexpediency of marriage. But it is never justifiable that parents should seek to ally their children with those for whom they have no affection, or contemplate only with disgust and repugnance. Paternal authority cannot reasonably compel alliances against which inclination protests; though there are too many forced and unhappy marriages arising from this cause.

The happiness resulting from a well-formed marriage, depends on mental excellence of the parties. This can only be known by long acquaintance. Love at first sight, and ball-room and street matches, are generally the sources of endless misery: they are formed without consideration, and originate in a transient excitement of feeling. "True love is founded on esteem, and esteem is the result of intimate acquaintance and confidential intercourse." This is the origin of pure and virtuous love. Marriages based upon this, and on proper religious feeling, are alone happy.

Love is implanted by the Deity in our common nature, and cannot be wrong. All nations, all people have felt the power of this passion. It has exerted its influence on all grades of society, and is equally powerful in the palace and the cottage. It has been sung by the sweetest bards of all ages. The passion of love is universal; it glows in every breast. True love is the perfection of esteem, and can never be extinguished. Its power so strongly attaches two individuals, that no human law can separate them; or if united in marriage to others, they can never be happy or contented.

PATHOLOGY OF THE HEART.

Auscultation of the Heart in a Morbid State—Auscultation of Arteries, and of Pregnancy.

(Continued from p. 19.)

Anormal Rhythm.—The anormal rhythm of the heart consists in the rarity, or slowness and frequency of the beatings, in their irregularity, and in their intermittence. The rarity, or slowness and frequency of the pulsations are easily understood.

The irregularities exist when there is an unequal interval between the beatings of the heart. Sometimes these are constant, and there may be but one irregularity in several pulsations. This may be shorter, but not more feeble than the rest. It differs from false intermittence by its suddeness. In some cases, the first bruit is prolonged, and the second feeble, and *vice versâ*.

When the ventricular systole, or con-

traction, is extraordinarily prolonged, M. Bouillaud says, that the pulsations of the heart are (*filés*) spun out. At other times, we hear two or three bruits synchronous with the dilatations of the ventricles; these rapidly succeed it, and form the *bruit de rappel* ("recalling or repetition.") In other cases, we count two or three motions of the systole for one of the diastole.

Intermittence is a sudden and instantaneous suspension of the pulse. Laennec used the term *true* intermittence, when the contractions of the heart were suspended, as well as the arterial pulsations.

False intermittence is applied to the feeble contractions of the heart, appreciable by auscultation, when those of the arteries cannot be perceived. The pulsation is sometimes extremely feeble, instead of being completely suspended. The duration of intermittence to that of the pulsation is very slight, on account of the very small quantity of blood. The contractions of the ventricles or auricles may be longer or shorter than natural. When these of the ventricles are lengthened, and also the period of repose, hypertrophy of these cavities is indicated, and is more considerable in proportion as the duration of the contraction is prolonged.

When the contractions are rapid, and the repose shorter than natural, this variation may coincide either with quickness or slowness of the pulse, and is not considered characteristic of any morbid alteration. The duration of the contractions of the auricles is rarely observed to be lengthened or shortened. They sometimes anticipate those of the ventricles, especially during palpitations, the effect of which is, that the auricular sound is masked, is not always the same; it is sometimes regular, except in one beat; at other times this is shorter, or longer, or stronger, or like the pulse, it may only occur every second, sixth, or twentieth pulsation. But in most cases its return is regular after a certain number of pulsations, but varies in fevers and other acute diseases at the approach of death.

M. Bouillaud has described a species of false intermittence, which he has designated a kind of *faux pas* of the heart, which arises from the left ventricle not being properly filled with blood during the systole, a common occurrence in contraction of the auriculo-ventricular orifice, it beats almost empty, upon the very small quantity of blood it contains.

Again, the auricles may contract two or three times during one systole of the ventricles, or *vice versâ*, and the pulse does not correspond with these deviations. These irregularities do not indicate any particular disease of the heart.

In some cases of organic lesion, the contractions are so rapid and irregular, that is impossible to analyze them. Intermission in the action of the heart and pulse may be present in ordinary health, but most commonly occurs towards the approach of death in acute diseases. Persons so constituted may lose the intermission during disease, and have it return during convalescence, or the restoration of health.

Auscultation of Arteries.—Laennec denominated all anormal bruits of arteries *bruit de soufflet;* but various distinctions have been made since his time.

The bruit, or sound of arteries, is produced by the shock of the column of blood against their parietes. It is clearly obvious, then, that the bruit will vary in intensity, according to the size of the artery, the strength and rapidity of the pulse, the age of the patient, the sex, constitution, temperament, habit, idiosyncracy, &c. The sound resembles the slight friction of one finger against another (Bouillaud.)

This bruit is heard in the arteries in anormal state; it corresponds with each ventricular systole, or to each arterial diastole.

The bruit is increased by the compression of an artery with the stethoscope.

The *intermittent bruit de soufflet* is observed in several diseases. In an ovarian tumour which pressed on the left iliac artery, and in the following cases by M. Bouillaud.

1. When there is an aneurismal tumour or pregnancy.

2. When the arteries are cartilaginous or osseous, with or without contraction of their calibre.

3. When there is communication between an artery and vein, as in varicose aneurism.

4. In excitement of the arterial system in thin anemic or chlorotic individuals.

Dr. Ficher, of Boston, cites many cases in which he observed the *bruit de soufflet*, by applying the ear on the head of persons affected with inflammation of the serous membranes of the brain. He designated the sound heard in such cases *encephalic bruit de soufflet*. This sign has not, however, been verified by later auscultators. It was said to depend upon congestion of the brain.

Bruit de soufflet continu.—Continued bruit de soufflet.—M. Bouillaud applied this term to the *bruit* sometimes heard in arteries, and compared it to the blowing of a bellows in a smith's forge. It accompanies the systole and diastole of arteries, but is strongest during the ventricular contraction. He has also called it *bruit de soufflet à double courant,* or with a double current. An intense degree of it he has termed *bruit de diable,* as it resembles the sound made in a play called the Devil.* It does not differ from the continuous *bruit de soufflet,* except in intensity.

The sound given by the arteries also resembles the cooing or murmuring of a turtle dove, or the whistling of the air through a key-hole.

The *bruit de diable* is most commonly heard in the carotid and subclavian arteries, rarely in the crural arteries, and never to the same degree in the preceding arteries. It is sometimes heard on both sides, but is stronger in one than in the other; but in general it is audible but on one side only. It is suppressed when the artery is compressed below the part in which it was heard, and it also disappears when the stethoscope is pressed strongly over the artery. It may also disappear and re-appear suddenly, without any evident cause. The change of the position of the patient alone will sometimes cause it to disappear.

Sifflement modulé ou chant des arteres.—Modulated whistling or singing of the arteries.—Laennec heard a real singing in arteries, the airs of which he thought he could distinguish. This resembles humming of certain insects, such as of the fly, or of a single bee flying in a silent place.

All the *bruits,* with the exception of the *intermittent bruit de soufflet,* were heard in chlorotic or anemic individuals. It is ascribed to a bad condition of the blood, peculiar to the diseases mentioned. It is remarkable, that in these we often observe œdema or dropsical symptoms. M. Raciborski has frequently observed this *bruit* after very copious or profuse blood-lettings, and that it disappeared after use of tonic regimen, which improved the condition of the sanguineous fluid.

M. Bouillaud has found the *bruit de diable* most frequently in chlorotic persons, who presented *embonpoint* or corpulency, and the singing or modulated whistling in thin and nervous persons.

Obstetric Auscultation.—Bruit Placentaire—Placental murmur—M. Mayor of Geneva was the first who heard the double beatings of the fœtal heart, and M. Jumeau de Kergaradec arrived at a more comprehensive conclusion; he distinguished two bruits at the fourth month and a half of pregnancy.

1. *Bruit simple avec souffle, ou bruit placentaire.*—A bellows sound, or placental murmur.

2. *Battement double du cœur du fœtus.*—A double beating of the heart of the fœtus*.

M. Ollivry, a physician at Quimper, wrote to Laennec, that in four cases the bruit ceased on the section of the umbilical cord, and he thought that it corresponded exactly with the insertion of the placenta.

Dr. Fergusson, of Dublin, considered the placental bruit unequivocal evidence of pregnancy (Dublin Med. Trans. 1830); and Dr. Evory Kennedy, in his work on Obstetric Auscultation, is of the same opinion (1834).

M. Velpeau has employed Auscultation in many cases in vain. (Traité Elementaire des Accouch. deuxieme edition, 1835); and M. Capuron attests the same conclusion. (Traitè des Accouch, 1834). I have also tried auscultation in several cases of pregnancy, without detecting either the placental murmur or fœtal circulation, but I have succeeded in other cases.

M. Bouillaud is of opinion that the placental murmur is nothing but the intermittent *bruit de soufflet* of arteries, and is the effect of compression of the large blood vessels of the abdomen, such as the hypogastric and external iliac arteries by the gravid uterus.

Laennec denied the accuracy of this conclusion, and stated, that if true, we ought to hear the bruit on both sides of the uterus, either at the same time or alternately, and that it might be displaced at will by varying the position of the patient.

M. Bouillaud replied that he had heard the bruit alternately in the right and left side, by varying the position of his patient. He also heard it in a case in which a tumour compressed the great vessels of the

* This sport consists in igniting a train of gunpowder or some other inflammable matter, which gives a continuous whizzing sound, according to some; and to the noise of a humming-top, according to others.

* Memoire sur l'Auscultation appliquée à l'etude de la grossesse. Par M. Jumeau de Kergaradec, 1822.

abdomen, which was mistaken for pregnancy.

But the double pulsation of the fœtal heart, when the ear or stethoscope is applied to the abdomen of the woman, after the pregnancy has advanced beyond half the usual time, is a positive proof of utero-gestation.

The double bruits of the fœtus will be heard in different parts of the abdomen, according as the position of the woman is varied; and the pulsations of the fœtus will be from 140 to 160 or 170 in a minute, and therefore totally different from the maternal pulse.

Whenever the fœtal pulsations are heard the infant is living, whether the mother feels its movements or not. This is a most important fact in practical obstetricy.

After what has been already stated, the inference is clear, that the placental *bruit de soufflet* cannot be depended upon as a tocologic diagnostic.

The double sound of the fœtal heart may be compared to the tic tac of a watch placed under a pillow on which the head rests. The intensity of the noise will be proportional to the advanced age of the fœtus. It will be heard in different points of the abdomen according to the position of the woman, at the most dependent part of the uterus in which the fœtus will be placed from its gravity. R.

CLINICAL MEDICINE.

Medicine is a science of facts, founded upon careful observation. All elementary studies in the medical schools are preparatory to clinical or practical observation, and upon this are founded diagnosis, prognosis, and treatment.

It is at the bedside that disease is to be observed, and here we see it in its true character. Clinical observation and instruction afford a correct knowledge of practical medicine.

Indefatigable attention to the medical and surgical practice in hospitals and dispensaries, is indispensable to every one engaged in the study of medicine. In these institutions, the nature and treatment of diseases is explained and the results observed.

Pathological or Morbid Anatomy, has raised Medicine to rank with the descriptive sciences. It enables us to contrast the diseased with the healthy states of organs, which general anatomy has already taught us. We must know the healthful state or tissue before we can distinguish the diseased. The principles of pathology are indispensable as well as those of therapeutics, including Materia Medica, Pharmacy, Surgery, and Hygiene.

The definitions of diseases are guides to medical students, and teach them diagnosis, or the power of distinguishing one malady from another.

A certain group of symptoms characterise a certain disease as fever, inflammation, &c, but in every such case there may be many other symptoms which are excluded from the definition, and which will vary according to age, sex, habit, &c. and because disease in any one part of the body may cause derangement of most or in the whole structures of body.

The Clinical professor or medical attendant explains the name of each disease and the best mode treatment. The student should then study in some of the best monagraphic, elementary, or systematic works; and thus acquire a perfect knowledge of it. The history of each disease ought to be reported in the Clinical hospitals, and transcribed by students.

In drawing up a case, the name, age, habit, temperament, occupation, and residence of the patient are to be noted, with the date, particular symptoms, duration of disease, causes, former maladies during infancy, childhood, puberty, adult age, and senescance, and likewise hereditary diseases. The diagnosis, prognosis, and treatment, should be given daily, or oftener, when necessary, and the results, termination, recovery, or morbid appearances duly recorded.

The style ought to be plain, clear, and concise, and if the narrative be given in an aphoristic form, it will be most precise, as each word will express an idea. We thus mark the name, sex, age, habit, or physical conformation, constitution, temperament, and profession of the patient; also inquire into idiosyncrasies, or pecularities of constitution, and effects of remedial agents.

We next inquire what is the most distressing, troublesome, or painful sensation. The patient replies that he has pain in some particular part, which at once directs the attention of the inquirer to the seat of his malady. It is in the head, chest, abdomen, or extremities. A momentary glance at the countenance, chest, abdomen, and general appearance, will enable a scientific practitioner to determine the seat of the disease. He can also conclude in a few minutes whether

the malady is a disorder of function, an unpleasant sensation, pain, spasm, &c.; or a disease, a change of structure, congestion, inflammation, or the usual sequences of the last, and whether it be acute or chronic.

In either case, disorder or disease of one organ will derange the whole, and may cause painful sensation, in several or all, and consequently a multitude of symptoms.

In every possible case, there is disorder of function, change of structure, or a combination of both.

In disorder of function the nervous power or innervation is anormal or disordered; and the internal and external use of sedatives is indicated.

In disease, the circulatory system is affected, there is congestion, inflammation, suppuration, ulceration, cicatrization, or gangrene. Disorder or disease may affect all parts of the body, in consequence of the universal distribution of nerves and blood-vessels.

It is most important to determine the existence of the one or the other, as the treatment must be different.

In disorder of function, without change of structure there may be some unnatural sensation, which may cause pains in all parts of the body, and be removed by the internal and external employment of sedatives.

In disease, general and local bleeding, low diet, counterirritation, purgatives, and diaphoretics, will be necessary.

In complicated cases, and these are very common, both classes of remedies must be employed.

It is not understood by society that a learned and scientific practitioner examines the hand, chest, and abdomen, in a minute or two; and patients suppose that they must detail every sensation they have felt for preceding months or years.

All complaints are either disorders or diseases, or both combined; and the latter are acute or chronic. The simple question, what is the matter? where have you pain? what distresses you most? will enable the enquirer to detect the seat of the malady almost in an instant. He then determines whether it is disorder or disease, and prescribes the appropriate remedies.

The fundamental principles of medicine are most happily fixed, or it would be impossible to arrive at a correct notion of disease.

Many patients cannot express their ideas correctly, and jumble the most opposite symptoms together, they enter into long digressions, and frequently confound the most different symptoms. They complain of all diseases. The question, where have you most pain? or where did it commence? will lead the practitioner at once to the chief seat of the complaint.

In examining nervous and some other patients, much time will be saved by inquiring which of your complaints is worst, and what was the first symptom, it affords a light which guides us through great darkness; and by it, we distinguish the circumstances that preceded the attack, as well as the nature of the complaint itself.

There are some patients who exaggerate their sufferings and whose expression of pain is not always real. Others put insidious questions to their medical adviser, in order to learn his opinion of their condition, such as hypochondriacs, nervous, and parturient women. The former suppose that they labour under one or many fatal diseases; the last are anxious to learn are they in a safe condition, and how soon they will be well or delivered.

We also observe many who simulate a variety of diseases with great success; but the pathological symptoms which belong to the functions independently of the influence of the brain, are the signs on which we can place absolute confidence. Physical signs will never deceive us, and we should always judge by them. The statements of patients, or sometimes of medical practitioners, cannot always be relied on, while physical evidence is invariably correct.

In examining patients, we should inflect the voice, and avoid putting our questions too abruptly, lest we confuse and embarrass them. There is an excellent chapter in the work of M. Double on Semeiotics, as to the method of examining the sick; and further information may be derived from the productions of of M. M. Merat, Creveilhier, and Martinet (see Dr. Quain's Translation.) M. Double divides the subject into two distinct parts: 1. the knowledge of the history preceding the diseases; 2. the circumstances which appertain to the disease itself. The physician ought to investigate all circumstances relative to surrounding objects, season, temperature, and medical topography, where he practises. He then learns the age, sex, profession, occupation, or mode of life of the patient; the passions, habits, general health, or ordinary state of functions; state of health before the invasion of the

disease; the hereditary diseases of the father, mother, and family; the antecedent diseases from the period of infancy; and, lastly, the general effects of medicines upon the constitution.

The practitioner ought to sit by the bedside, so as to see the patient's countenance, and then examine the external appearance of the body, attitude, movements, coloration of the skin, &c.; he then compares the existing and natural states of the functions, and proceeds to to inquire into the state of the external senses, respiration, circulation, including the state of the heart and pulse, digestion, secretions, excretions, generation, sensibility, irritability, voice, voluntary motion, sleep, intellectual faculties, and temperature of the body. Every part of the human body is thus examined and passed in review. We also know all that belongs to the symptoms, mutations, and sympathies; all the circumstances that can modify the signs and prognosis of diseases. The nature and treatment of the complaint are then easily determined.

It is right to visit the patient at the paroxysmal periods, or when he is worse; and also at other hours.

It is worthy of remark that individuals who suffer from the effects of libertinage are often ashamed and disposed to mislead their medical advisers. A large experience warrants me in stating, that the abuse of the generative function is a most common cause of indigestion, hypochondriasis, (neuralgic or painful,) and nervous complaints. It requires great delicacy and caution in alluding to this function at all times, but especially when young persons are our patients. The excitation of the generative organs at puberty, and often during the whole time of celibacy, leads to the adoption of natural or other means for its subdual. There are, of course, exceptions to this general proposition. Those who abuse or overexert this function are affected with severe indigestion, flatulence, lowness of spirits, fear of death, dread of impotence, and innumerable unpleasant sensations. Such cases are of frequent occurrence from the age of puberty to the decline of life, and sometimes even in old age. The celebrated Tissot has given numerous illustrations in his work on Onanism; and a vast number has fallen under my own observation. (See also, "De l'Onanisme et des autres Abus Veneriens, considerés dans leur rapports avec la Santé," par M. Deslandes, 1835.)

In delivering an opinion to a patient, the physician, or medical practitioner, ought, in general, to predict a favourable result, when circumstances permit; avoid alarming him, and hope for the best. He may, however, express his real opinion to the relatives, so as to give them the opportunity of consulting others if they think proper.

In most cases the prognosis must be guarded, as so much depends upon the mutations of disease, punctuality of attendants in following directions, on the season, situation, and compliance of the sick. Medical practitioners have often been most unjustly ridiculed by the world on account of the ambiguity of their opinions as to the issue of acute diseases; but no man, for the reasons just mentioned, can be positive as to the prognosis. He may state he is most happy to say that, at this moment, there is no danger, but diseases undergo numerous changes, and that it is utterly impossible to predict with certainty the result.

This is the fact, and truth, in the majority of human infirmities, more especially when in an acute form.

The diagnosis, or distinction of diseases, is also a matter of grave importance. If the disease is mistaken, censure of the medical attendant will assuredly follow. Thus, suppose it is stated, that a young woman of irreproachable character is affected with gonorrhœa, or is pregnant, where there is really no such disease or condition, the practitioner would be most severely and unjustly censured. It was a common error to assert that female children, from the age of six to fourteen years, had been violated and infected with gonorrhœa when their condition depended on physical diseases. Such cases are noticed by Underwood, Hamilton, Dewees, Jewel, Sir Astley Cooper, and numerous French authors.

It is important to gain the confidence of the sick, so as to obtain the disclosures which are necessary to form a proper decision on their diseases. The medical adviser should be calm and conciliating, hear patiently all communications, put his questions with mildness, listen attentively to the narrative of all complaints, and always show a warm interest in the welfare of his patients. He ought to possess sensibility, humanity, amenity, amiability, and compassion. He must make the great allowances for the conduct of those in pain and suffering. Thus a medical practitioner must display all the finer feelings of human nature, and all the moral excellencies which distinguish

the true cultivators of his art, while he is affording aid at the painful process employed by nature at the nativity of his species. Women are naturally timid at this period, and require all the sympathy and kindness that can be shown towards them.

The medical practitioners ought to be most patient, humane, benevolent, and never resent any offensive remarks that may be applied to them by the sick. Such remarks are invariably apologised for by patients.

Lastly, they ought to be cool and undisturbed in the worst cases. Perturbation of mind betrays weakness and ignorance. If agitation and indecision characterize us, the patients will lose all confidence in us.

One who knows his profession well, will never be agitated; he will employ the resources of his art, and if these fail, he will remember that all medicine is from God, and that it may not be accordant with his divine will that recovery should happen in any given case of disease. It is right to add, that medical pupils should avoid fatiguing hospital or dispensary patients, whom misfortune has placed in such asylums, by asking the same questions several times over, and often without any determinate object. "It should never be forgotten," says Dr. Martinet, "that misfortune has the strongest claims on the sympathy of every man; and that every principle should prompt us not to expose ourselves to such a censure as Martial passed on one of the physicians of his time:—

"Languebam, sed tu comitatus protinus ad me
Venisti centum, Symmache, discipulis.
Centum me tetigêre manus, Aquilone gelatæ,
Non habui febrem, Symmache nunc habeo."

In acute diseases, the previous history of the patient is of little importance, though of great value in chronic complaints. Repose and quietude are essential in the former cases, as the circulation of the blood is generally accelerated. Much stress is laid on a knowledge of the constitution, as it enables us to foresee, in most cases, the form which diseases are likely to assume, the course they will probably take, and the termination that may be expected.

The temperament informs us of a certain organic development, and of the diseases to which it is most liable.

The physical conformation also predisposes to diseases. Thus, infants whose heads are disproportionately large, are liable to encephalitis, hydrocephalus; those with narrow chests, to diseases of the lungs; and those in whom the abdomen is large, to gastro-intestinal irritation, inflammation, or ulceration.

We review the different organs in the body, we consider them in reference to their predominance of action, their susceptibility relative to climate, seasons, different temperatures, aliments, drinks, exercises, passions, and habitual or accidental diseases.

The rules for prescribing and compounding medicines ought to be well understood. Diseases are cured with medicines, and not with words. The relief or cure of the patient is the sole end of medicine. All elementary studies are subservient to this great and important object. It is the aim and end of medicine.—R.

Abstract of a Communication on the Subject of Tetanus, read at the Medical Section of the British Association, at Bristol, on Monday, the 22d of August, 1836; by James O'Beirne, M.D., Surgeon Extraordinary to the King, &c. &c. Dublin.

(*From our own Correspondent*).

Dr. O'Beirne commenced by showing the very extensive opportunities which he had enjoyed, both in his military and civil life, of observing and treating this most fatal and mysterious disease; the laborious research, and the patient and strictly clinical observation which he had devoted to the investigation of the subject from a very early period, particularly for the last fifteen years. He then repudiated all other species of the malady than the traumatic and the idiopathic, to the latter of which he applied the term "atraumatic," as being more expressive and scientific. He admitted no such varieties as trismus, tetanus rectus, or pleurosthotonos, recognizing only opisthotonos and emprosthotonos. Instead of dividing the latter varieties into acute and chronic, he proposed dividing them into the peracute, acute, subacute, and chronic. He agreed with most authors upon the causes, but considered certain unknown electrical states of the atmosphere as the most general and operative. The extreme periods of the accession of the traumatic species, he stated to be the fourth and seventeenth days from the infliction of the wound; and also stated that it never attacks after the cicatrization of a wound, or during an inflamed state of a wound,

and that it does not supervene upon burns, scalds, military flogging, or other injuries of the skin which do not penetrate the fascia or the muscles. He asserted the general character of the disease to be the same in all climates and countries, and to have been the same in all ages. He denied the existence of any premonitory symptoms—and stated that the disease is never ushered in or attended by cutaneous eruptions, or by any febrile symptoms—that it has no tendency whatsoever either to crisis or to sudden disappearance—and that recovery invariably takes place slowly, the period varying from eighteen days, to seven, eight, and even nine weeks. After making these, and many other equally novel statements, respecting the attack, course, and termination of the malady, he described, with great minuteness, all the phenomena of the disease, and the general laws by which it is regulated, in order to show what constitutes genuine tetanus; and, amongst other highly interesting facts, he mentioned, that he has seen the peculiar tetanic expression of the face retained for fourteen years. (Here a lithographic representation of the face of a patient, during and between the tetanic paroxysms, was exhibited to the Section).

He considered the singular alteration of the countenance to be the only true pathognomonic sign of the disease; and declared the phenomena and laws of this affection to be more uniform and definite than those of any other. He considered that there were many strong reasons for believing that the degree of general suffering which the patient endures, is by no means so great as is universally supposed, or as the external and very frightful characters of the malady would seem to indicate. He then stated, that after *post-mortem* examinations made in several cases of opisthotonos, and which he knew to be genuine, the only morbid or abnormal appearances were great distention of the cæcum and colon, and rigid contraction of the rectum; but that in cases of emprosthotonos, either the heart or lungs, or both of these organs, were always found more or less diseased. He next showed the extraordinary extent to which the disease has been confounded with injuries of the temple, face, mouth, and pharynx—and with hysteria, rheumatism, spinal irritation, spinal arachnitis, cynanche tonsillaris, and a peculiar affection to which he gave the name of pseudo-tetanus. He also showed how satisfactorily such mistakes explained numerous perplexing circumstances relating to the pathology and treatment of the disease. Dr. O'Beirne then described the difficulties which he had encountered in founding a correct pathology of tetanus, the means and steps by which he was enabled to overcome these difficulties, and ultimately to arrive at a satisfactory solution of those long contested and unsettled points, the seat and nature of the malady. He placed its seat in the substance of the anterior column of the spinal marrow, and showed that it is purely functional in its nature, and consists in either an accumulated or a peculiarly intense condition of the motific principle, residing in the anterior spinal columns or pyramids, and their prolongation to the optic thalami and striated bodies. But he considered that an affection of the origin of the pneumo-gastric nerves is superadded in cases of emprosthotonos. The remedial agents which he employs he stated to be tobacco, the gum elastic tube, and croton oil, and then mentioned the rules which should guide their employment, and without a knowledge of which life might be sacrificed at the very moment of success. He next laid before the section a tabular view of twenty cases treated upon his plan, from which it appeared that eleven terminated in perfect recovery. From this document it also appeared that, of the remaining nine cases which proved fatal, one would have been successful, if the use of the tube had been known at the time; while, in six others, it was found that the patients had laboured under organic disease of either the heart or the lungs, for a long period previous to the attack of tetanus. He then asserted this amount of success to be far greater than had ever been obtained; and that the uncomplicated disease is no longer to be considered either incurable or mysterious. Dr. O'Beirne concluded by stating that Mr. Walker, a veterinary surgeon, of Dublin, to whom he had communicated his mode of treating the disease in man, had succeeded in recovering seventy-three horses affected with tetanus.

After the reading of this paper there ensued a very interesting discussion, in which Drs. Yellowly, Reid, Howell, Wallis, Fowler, and Symonds, and Messrs. Broughton, Carmichael, Hetling, King, Bracy Clark, and others, severally took a part; and there seemed to be a general impression that Dr. O'Beirne's intended work on this subject would prove a great boon to humanity and science.

The abstract of Dr. O'Beirne's work contained a lucid exposition of a vast number of anomalous affections of the nerves; and there is no doubt, from the enthusiasm shown by the large auditory in the medical section, but it will be a production of standard authority. It is to be hoped that the experienced author will speedily place it within the reach of his brethren, by publishing it.

Great Men the Offspring of Ordinary Parents, and the Sons of Ordinary Children.

Great men, it is justly observed, seldom, indeed, scarcely ever, have great sons. Physiologists have attempted to account for this fact in various ways, and the favourite opinion advanced is, that it requires great physical power in the parent to procreate a being of such conformation as to outstrip his fellows in intellect. In support of this doctrine, various and numerous instances are brought forward, in which great men have been sons of working people, Shakspeare was the son of a wool-stapler, Newton's father was an agricultural labourer, Heyne was the son of a poor weaver, as was also the Abbe Harry; Winckelman was the son of a shoemaker; Valentine Duval's father was a peasant; Metastasio was the son of a common mechanic; Haydn's father was a wheelwright; the father of Opie was a working carpenter; the parents of Sebastian Castalio, the elegant Latin translator of the Bible, were poor peasants of Dauphiny; the Abbe Hautefeinde was the son of a baker; Fergusson was the son of poor peasants. These are a few of the many great men who have descended from working people, who we may justly consider were more likely to have their physical than their mental faculties well developed; but, on the other hand, we can show many instances in which great men were the sons of parents who did not work for their bread. Milton, Locke, and Bacon, we believe, received college education; Savage was the illegitimate son of a peeress; Addison's father was high in life; Cowper was descended from a highly connected family, his father was a clergyman. There are a few instances on the other side of the question. We have not sufficient evidence before us to decide at once, that genius is the result of great physical power on the parts of parents. We have, however, a striking portion of presumptive evidence in favour of the fact, in that of great men seldom having great sons We know that none of the illustrious men whose names are above left sons who are worthy of remembrance after them. Neither did Dryden, or Pope, or Otway, or Johnson, or Tasso, or Ariosto, or Bonaparte, or Sir P. Sydney, Byron, Mozart, Raphael, Corregio, Michael Angelo, or Salvator Rosa, or, indeed, any of the great men whose names are placed in the temple of Fame, except, we believe, the great Lord Chatham, and he is often mentioned as an exception to the rule.

On the whole, we are inclined to think that physiology assists us little in the enquiry; this portion of it, as well as all others regarding reproduction, appears to be still in the dark. Perhaps, after all, the following passages from a work of Lady Morgan's embodies all we know on the subject.

"One curious fact may be added, that persons of genius are generally the offspring of ordinary parents, and the sons of ordinary children. Talent is no heirloom, and Nature, in selecting one of a race as the subject of high endowments, seems to sum up all her forces on a point, and then to recall *her* honours, as kings do others, receiving back at the hands of the son the brilliant distinctions their favour had conferred on the father."

"If genius, as physiologists suppose," says Lady Morgan, "consists in a peculiar development of organs, it may be that nature, who never rests in her progress, having attained perfection, hurries on to opposite extremes, and thus, though both parents should possess the intellectual temperament, the child would only be the more exposed to the vice of excess. In general, however, the offspring is not an exhibition of its parents, but exhibits traces of the peculiarities of remoter relations."

NORTH LONDON HOSPITAL.

Rheumatic Inflammation of the Eye.

Jane Dewson, aged 29, was admitted July 15, under the care of Mr. Liston. Last November had erysipelas of the face and head, from which, with the exception of the eyes remaining in a very weak state, she soon recovered, without using any remedies. About Christmas after, exposing herself to damp and cold, she had a severe attack of rheumatism, and the inflammation and pain of the eye became much increased; for this she was attended by a medical man, who gave her medicine and pills to be taken night and morning, which did not, however,

make her mouth sore, or the least tender: she also had leeches applied near the eye, from which she experienced slight relief. During the last six weeks the eye has been more inflamed and painful; and, under the direction of Mr. Guthrie, she has been blistered behind the ears, cupped and leeched on the temples, and taken pills, which did not occasion any tenderness of the gums. There is at present a zone of white round the border of the cornea, corresponding with the insertion of the ciliary ligament; a bright redness, apparently beneath the conjunctiva, covering nearly the entire sceloretic coat. She has great intolerance of light, and complains of intense pain all around the orbit, particularly its upper half, which is much increased during the night. The secretions of the eye are but little increased in quantity, and the pupil is contracted.

Hirudines iv. intern. canth. applicand.
℞. Vin. Colchici, ʒss.
Magnes. Sulph., ʒi.
Aquæ Distil., ʒviij. Coch. ij. ter die.

18th. The pain is not in the least relieved: the redness remains the same.

Rept. Hirudines iv. Bowels open.

20th. Feels a little better; but still has considerable pain during the night. Bowels open.

Emp. Cantharid. pone aurem.

22d. Pain is much relieved, and is now worst at the lower part of the eye. Pupil is not so much contracted, and she sees more distinctly the surrounding objects.

Discharged nearly well on the 23d.

Disease of the Knee Joint.

Charlotte Lear, aged 19, was admitted July 15, under the care of Mr. Liston. Two years since the ankle-joint became painful, and the parts around it much swollen; this soon disappeared, and the knee-joint afterwards became affected in a similar manner, but the swelling and pain were never sufficient to prevent her following her usual occupation. A year after this, the swelling which had never completely subsided, began to increase in size, became hot, painful, and tender when touched. Leeches and blisters were now applied; and, lastly, a pea issue was formed on each side of the joint, which discharged very little matter. From these means she derived but slight benefit, as she did not confine herself to bed, but continued moving about as usual. Within the last month the pain has been more severe, and the swelling getting larger: it is now nearly double the usual size of the joint. She cannot completely extend the leg, and is quite incapable of flexing it in the least degree. Bowels open; tongue clean. Warm water fomentations to the joint.

24th. Has complained of some pain in the side, to which a blister was applied, which afforded her great relief.

27th. The irritation in the joint nearly subsided.

Discharged on the 29th well.

Researches into the Physical History of Mankind. By J. C. Prichard, M.D. F.R.S., &c. Third edition, Vol. I. pp. 376. London, 1836; Sherwood and Co.

The celebrated author of this curious and instructive work has the merit of having written the first English treatise on the natural history of mankind. He selected the subject for his inaugural dissertation at Edinburgh, in 1808; and in 1813, having enlarged it, he published it in a distinct work. The venerable and illustrious Blumenbach explored the subject, in 1808, in his Comparative Anatomy of the Human Races; but, says Dr. Pritchard, "the comparative physiology and psychology of different races of men, had never been made expressly the subject of inquiry until the publication of my work." He further informs us that each edition of his production had been written anew, and such additional information added as came to his knowledge between the period of publication of each impression.

In a well written preface he takes a view of the works of contemporaneous authors, and he states that Mr. Lawrence and himself arrive at the conclusion, that there is a unity of the human species; while Rudelphi, Virey, Desmoulins, Bory de St. Vincent, Cuvier, and Humboldt, contend for a diversity of the races of men. Our author entertains the conviction that many readers will agree with him in opinion, notwithstanding the phalanx of his oponents.

The natural history of mankind is a study of deep interest to the general as well as the medical reader; and he who wishes for a profundity of curious details concerning it, ought to possess this admirable work. It is embellished with plates which are beautifully executed. We hope to see the second and concluding volume speedily published.

The Speculum applied to the Diagnosis, and Treatment of Organic Diseases of the Womb: An Inaugural Dissertation presented to the University of Glasgow for the Degree of Doctor in Medicine. By John Balbernie, M.M., M.D., &c. &c., 8vo. pp. 335: Longman and Co.

The pathology of the uterus and its appendages, is but very imperfectly known in this country; and our works upon this class of diseases are as meagre as they possibly could be. Diseases of women are as yet most superficially attended to in our hospitals. The physicians and surgeons are prevented, by most absurd and inhuman by-laws of their respective colleges, from investigating and treating genital diseases of the weaker sex; and the unfortunate subjects of them are generally excluded from our public institutions. They apply at dispensaries, or are obliged to enter workhouses, for medical aid, where the new poor law bill has placed medical officers, in too many recent cases, totally incompetent to treat disease. The neglect of gynæcopothology is a disgrace to British practice; but we entertain a lively hope, that, ere long, it will be duly investigated. Our Gallic neighbours have set us a noble example, and have brought this branch of science to a degree of perfection never before equalled. It need scarcely be observed, that daily experience so amply proves the very frequent occurrence of uterine diseases, and the utter carelessness of practitioners with respect to them. Too many are content with declaring there is some disease of the uterus or ovaries, and that nothing can be done except improving the general health. Many unfortunate patients have fallen under our care who had suffered for six or ten years, and for the investigation of whose diseases no vaginal examination had been instituted. Tonics and mercurial pills were the remedies prescribed, while morbid lesions were advancing, which, sooner or later, destroyed life. Some of the sufferers had been in hospitals for weeks or months, and nothing ordered for them save the prescription of some aperient medicine; no attention was paid to the pathology, and, consequently, the therapeutic plans were erroneous and inefficient.

Our contemporaries in France have made immense accessions, within the last years, to our knowledge of uterine diseases, and the result of their labours, as well as of the author's own observations, are now offered to British readers.

We need not observe that M. M. Ricord, Lisfranc, Duges, Recamier, and others of their distinguished countrymen, have employed a speculum in the exploration of uterine and vaginal diseases, and have found it afford a positive means of diagnosis. M. Ricord has shown, by means of this instrument, that gonorrhœa never produces syphilis, nor *vice versâ*. He has also rendered the study of uterine diseases exceedingly simple and easy. This is a matter of congratulation to every industrious medical student and practitioner: it enables him to detect the real nature of disease, and to treat it as successfully as the nature of his art will allow. Every humane member of our profession, provided he be acquainted with obstetric pathology, must have deplored the mass of suffering and the amount of mortality produced by female diseases, and the culpable ignorance evinced in the investigation of their nature and treatment. He must have seen the most foolish attempts made to afford relief in cancerous and other malignant ulcers of the uterus, accompanied by purulent or sanguineo-purulent discharges, which were ascribed to leucorrhœa, and treated by tonics, &c.

The author before us undertakes the laudable object of directing the serious attention of his brethren to the detection of uterine maladies by means of the speculum. He has written a powerful introductory address on the necessity of exploration with the instrument just mentioned, which richly deserves mature reflection. He has there given a brief historical sketch of the pathology of uterine diseases, from that of the father of medicine downwards. His next chapter is on the womb, and its exploration. Dr. Balbirnie then proceeds to give a graphic description of uterine diseases; and bases his account on actual observation. He gives the most ample evidence that the speculum is as important in the class of diseases to which it refers, as the stethoscope is to those of the lungs. His work evinces extensive research and observation, and proves the author to be full master of his subject. He adds several cases treated by MM. Ricord, Lisfranc, and Emery, in which the diagnosis was most correctly deduced from the use of the speculum.

This work is a valuable addition to obstetric medicine, and will be one of constant reference.

Lectures on the Means of Promoting and Preserving Health, delivered at the Mechanic's Institute, Spitalfields. By T. Hodgkin, M.D. Lecturer on Morbid Anatomy at Guy's Hospital. 12mo. pp. 119. London, 1835: Arch.

It is highly gratifying to every friend of humanity to observe so many of the brightest ornaments of medical science diffusing knowledge of the greatest value in a popular form to large communities of industrious operatives, and other attendants at Mechanics' Institutions. Nothing can contribute so much to the conservation of public health as popular lectures on the means of preserving it; which include physiology and hygiene; and if these were published in the daily journals, the laudable attempt of our profession would be most successful. The philanthropic author, whose work has given rise to these observations, expresses his obligations to one of the public papers for having inserted extracts from his lectures, and we fully assent to his sentiments. If our brethren would exert their influence with the conductors of the public press, and obtain their aid in diffusing lectures on hygiene, the most incalculable good would be done the bulk of the community. It is pleasing to acknowledge the increased co-operation of the public press of late years in promulgating medical information; and it is to be hoped the time is at hand when it will devote a portion of its space to this branch of science.

Dr. Hodgkin's lectures were designed for the class of readers, for whom the series of publications styled the "Working Man's Companion" has been commenced by the Society for the Diffusion of Useful Knowledge. These lectures form an excellent manual on hygiene, which ought to be in every mechanic's and working man's possession; as well as in those associations called Clubs and Benefit Societies. It is a work that ought to be in every family, as it abounds with information which is both instructive and important on the preservation of health. It well deserves the patronage of the Society for the Diffusion of Useful Knowledge.

Flora Hibernica; comprising the Flowering Plants, Ferns, Lichens, &c. of Ireland; arranged according to the Natural System. By J. T. Mackay, M.R.I.A. Dublin, 1836: Curry.

This is the first production on the Irish plants in a form corresponding to the actual state of botanical science. It is highly creditable to the author as a botanist. He has adopted the natural system; and taken the characters of classes and orders from the works of De Condalle and Lindley; and the arrangement employed by the last-mentioned writer in his "Synopsis of the British Flora," is, with few exceptions, imitated. The characters of genera and species are chiefly from Hooker's British Flora; and for those of the mosses, lichens, and hepaticæ, the author is indebted to Dr. Taylor, of Cork.

Mr. Mackay has described thirty-five new species of lichens, and one new genus—Syncesia. He has long maintained a distinguished rank as a botanist, and we expect much additional information on Irish plants in the future editions of his work.

This work will be a text book in the medical schools of Dublin, and ought to be possessed by all lovers of botany.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[*From our own Correspondent.*]

WEDNESDAY, AUGUST 24th.

Section A.—Mr. S. Harris read a paper on some phenomena of electrical repulsion, in which he endeavoured to show in this paper that, from the disturbing force of electrical induction, the indication of electricities, operating by repulsion, are often anomalous and irregular, and do not, under all circumstances, indicate the quantity of electricity with which the repelling bodies are changed. Mr. Challis read a report on the mathematical theory of fluids. Professor Stevelly read a paper on the interpretation of the double sign in certain algebraic formulæ. Mr. Adams made a communication on the interference of sound. Mr. Mac Cullock read a paper on the laws of double refraction in quartz.

Section B.—Dr. Daubeny read a report on the present state of our knowledge with regard to mineral waters. He first stated the ingredients that had been detected in atmospheric water, and in that of the sea and lakes, and then proceeded to detail the facts of recent observation with respect, first, to the temperature; secondly, the ingredients, solid and gaseous; and thirdly, the medical properties of the particular waters. He concluded his valuable paper with some re-

marks on the origin of the heat of springs. Mr. Muschet exhibited specimens of iron ore, and explained the process by which iron is generally separated from its ore. Professor Johnson explained the constitution and properties of para cyanogan. Mr. W. West, of Leeds, read a paper on the means of ascertaining the presence and proportion of substances diffused in small quantities through the atmosphere. The method proposed by him is by means of self-adjusting windsails, to draw large measured quantities of atmospheric air through liquids calculated to combine with and detain the foreign substances expected. Dr. Hare commenced the reading of a printed letter, addressed by him to Berzelius, on the Berzelian nomenclature, with a view to its reformation.

Section C.—A communication was read, drawn up by Dr. Riley and Mr. Stutchbury, on certain Saurian bones discovered in the dolomic conglomerate of Durdham Down, near Bristol. Mr. Hopkins read a paper containing theoretical views on the geological phenomena of elevation, and the Section adjourned.

Section D.—Colonel Sykes read an elaborate and valuable essay on the agricultural products of the Deccan; among the native vegetables may be mentioned the golden plantain, a tree of large size and luxuriance, the nutmeg, cinnamon, cashew, several varieties of figs, &c. &c. Mr. Mackay read a paper on the plants growing in Scotland. Mr. Royle made some remarks on caoutchoc; he described the trees yielding this substance; many of the plants which yield caoutchoc are remarkable for the tenacity of their fibre, which fitted them for rope making; he mentioned that he had obtained caoutchoc from the juice of the mulberry, and from the lettuce. The next paper read was by P. Duncan, Esq., on the luminosity of the sea; after which some remarks by Dr. Hancock were read, on the river cow of the inland waters of Guiana, which the author considers to be a new species of manati. The Section concluded with a paper by Dr. Macartney, on the mode of preserving animal and vegetable substances.

Section E.—The report of the Dublin Committee, appointed by the British Association, on the motions and sounds of the heart, was read. Dr. Clandining read the report of the London Committee, on the same subject. Mr. Greeves read a paper on the gyration of the heart, which was followed by one from Sir D. Brewster, on the polarization of light observed in the crystalline lens, and another by Dr. Carson, on absorption.

Section F.—Mr. Stanway read Mr. W. R. Gregg's outlines of a memoir on statistical desiderata. Dr. Lardner gave a lecture on the means of inter-communication by rail-roads. A very elaborate paper was then read by John Taylor, Esq., on the mining districts of Great Britain; after which the meeting adjourned.

Section G.—Mr. D. Gilbert read a paper on naval architecture. Mr. Russell gave a lecture on the paddle wheels of steam vessels; and the Section adjourned.

Thursday, August 25th.

Section A.—Mr. Talbot read a paper on the integral calculus. Dr. Apjohn read some remarks on the specific heat of gases; he considers all gases to have different temperatures, and thinks that no simple relation exists between their specific heats, and their specific gravities, or atomic weights. Mr. Scoresby read a paper on two magnetical instruments, and Professor Forbes on the terrestrial magnetic intensity at various heights.

Section B.—Dr. Dalton entered into an application of his subject of atomic symbols, in which, he says, he gives both the number and position of the various elements and principles. Professor Johnson brought before the Section his chemical tables, of which a specimen, entitled "Chemical constants," had been laid before their meeting at Dublin. Mr. Herepath read a paper on Lithiate of Ammonia, secreted by insects living entirely on vegetable food. Dr. Thomson read a detailed account of the experiments he had made on the combinations of sulphuric acid and water. Mr. W. C. Jones read a paper on a peculiar modification of gluten and on a peculiar volatile fluid.

Section C.—The Marquis Spineto read a report of the attempts made to ascertain the latitude of the ancient city of Memphis. Mr. Fox read a paper on the change in the chemical character of minerals, induced by galvanism. Mr. Cross read some remarks on the means of producing artificial crystals and minerals, by means of chemical combinations, after which Mr. Murchison read a paper on the geological relations of certain calcareous rocks, near Manchester.

Section D.—Dr. Richardson concluded the reading of his report on the zoology of North America. Mr. Carpenter read an elaborate and valuable essay on the mode of distinguishing the species. A

paper was read on the formation of peat by Mr. Duncan, and after several other short zoological communications, the sections broke up for the present meeting; their intention in not holding a meeting on Friday, being to leave room for some botanical excursions, which were projected for that day.

Section E.—Dr. Hodgkin read the report of the Committee appointed to investigate the subject of the connection between veins and absorbents. All the substances which were injected into the veins were found in the lymphatics, and mercury injected into the lymphatics would sometimes pass of by the veins. Dr. H. had seen lymph flowing in the thoracic duct tinged with blood, and cited from various authors to show that there is a communication between the veins and lymphatics. The committee are to pursue the subject. Dr. Reid read his paper on the functions of the nervous structure. A communication from Mr. Alcock, was read, on the anatomy of the fifth nerve. The last paper read was by Mr. Walker, on the nerves and muscles of the eye-ball.

Section F.—Dr. Collins read a paper on the periodicity of births. Baron Dupin exhibited a map of Great Britain and Ireland, showing the comparative density of population, and state of crime in their several districts. Mr. Heywood read the report on the state of education in Liverpool, after which, Mr. Fripp read his paper on the statistics of popular education in Bristol.

Section G.—Mr. Chalfield read a very long essay on naval architecture. Mr. Emmys gave a long account of the Cornish steam engines. Dr. Lardner continued his lecture on steam communication with distant parts.

FRIDAY, AUGUST 26th.

Section A.—Mr. Whewell read a paper on a new Menometer. Professor Phillips read a notice of the probable effects of elevated ground in the direction of the lines of equal magnetic dip. Mr. Stevelly read a paper on the mathematical rules for constructing compensating pendulums. Mr. Russell read a paper on certain elements of the resistance of fluids that appear to be intimately connected with the application of analysis. Mr. Hodgkinson read an account of some experiments to determine the comparative strength and other proportions of iron, made with the hot and cold blast.

Section B.—The following papers were read: some improvements on the voltaic battery, by Mr. Crosse; on a new compound, formed during the destructive distillation of wood, by Mr. Scanlan; on a peculiar compound of carbon and potassium, by Mr. E. Davey; on the conducting power of iodine, by Dr. Inglis; on detecting the strength of spirits, by diluting with water, by Mr. Black; on the aurorea borealis, by Dr. Traill.

Section C.—Lord Nugent read a paper respecting some sea rivulets in the island of Cephalonia. Mr. Charlesworth read a paper on determining the ages of tertiary deposits. Professor Forbes made a communication on the connexion of the Syrenean hot springs with the geology of the district.

Section E.—The first paper read was on the "pathological condition of the bones in chronic rheumatism," and on "the condition of the new circulating channels in a case of double popliteal aneurism," by Mr. Addams. Dr. Evanson read a paper on fracture of the neck of the thigh-bone. Mr. Hetling made some remarks on a new instrument for the removal of ligatures of arteries at pleasure. Its use was illustrated by several cases, particularly in the exhibition of a patient with double popliteal aneurism, in which the operation was facilitated, and the disease cured, by the application of the instrument. In the case of Lord Nelson, who endured the adhesion of a ligature four months on the stump of his arm with agony, the ligature and pain would have been instantly removed by the application of this instrument. The last paper read was by Dr. Thompson, on the chemistry of the digestive organs, which concluded the business of the section for this year.

The members of the Botanical and Zoological, Statistical, and Mechanical Sections, were this day engaged in excursions to various parts of the country.

SATURDAY, AUGUST 27th.

Only two Sections met this day, viz.—Sections C. and G.—At the former, the Rev. G. Grigg of Belfast, gave a lecture on Aerostation, and at the latter, H. Perkins, Esq., read a long essay on the transmission of sound by the rarefaction of the air.

The business of this 6th meeting of the Association concluded at the theatre this evening, when it was announced that the next meeting would be held at Liverpool, in September, 1836, president, the Earl of Burlington.

Most Interesting and Important Discovery. British Association. Thursday, Aug. 25th. Section C. Geology and Geography. Artificial Formation of Crystals, Quartz, &c.

"Mr. Cross then stated, that he had devoted a great part of his life to the pursuit of electricity, and that he came before the Association merely in the character of an electrician, being by no means a geologist, and but in a moderate degree a mineralogist. But, being early impressed with the notion that it would be desirable to produce, if possible, a long-continued, undiminished electrical action, he had set himself to work, and after many trials he had constructed an apparatus, which had for no less than an *entire year* retained its electric energy, and this by the agency of pure water only. He had also conceived, that it being by long-continued processes that nature produced most of the effects which we observe, it might be possible to form substances similar to what she affords, by adopting a mode like hers. His attention had been directed to a cavern in the Quantock Hills, in which he had observed calcareous spar incrusted on limestone, and arragonite on clay slate: these minerals had evidently been formed by the water which percolated the rocks. Some of this water he brought to his house, and presented it to the action of his Voltaic apparatus: for nine days he anxiously watched for a result, but no visible one offering, he had almost given up the experiment, when, on the tenth day, to his great delight, he succeeded in procuring minerals the same as in the cavern. He was thus encouraged to prosecute further experiments; and, in the course of his investigations, he found that light was unfavourable to the perfection of crystals, he being enabled, in a much shorter period, and with much weaker electric power, to produce them in the dark. He formed several crystals of metallic minerals, but his most successful experiment was the production of quartz from fluo-silicic acid, and his inspection of what has been perhaps never before observed by mortal eye, the process of crystalline developement from the beginning. He had traced a quartz crystal, first, as a hexagon marked upon the matrix—then lines radiated from its centre—then parallel lines were formed parallel to its sides—it increased in thickness, but, owing to some disturbance of the operation, the process of forming a single perfect crystal was not completed, for a second crystal grew up and intersected it, offering an additional confirmation of the resemblance of Mr. Cross's process to that of nature, where this penetration of crystals into each other is everywhere to be observed.

"It would be extending this report too far to relate all that Mr. Cross communicated to the Section regarding the details of his experiments; but it is impossible to convey an idea of the enthusiasm with which his statement was received by the crowded assembly present. There appeared to be a real *electrical* effect produced upon them; they seemed as if the interior recesses of Nature had been of a sudden laid open to them, and her processes, which had been conceived as past all mortal ken, submitted to their inspection. Mr. Cross was often interrupted during his address with loud peals of applause, which lasted for several minutes after he sat down.—Mr. Conybeare said, that he found himself so excited with the intelligence that he should not submit his observations on the South Wales Coal Basin; he considered any communication he could bring forward totally eclipsed in interest by the overpowering intelligence brought by Mr. Cross.—Upon that gentleman, Mr. Sedgwick passed also a highly eloquent eulogium.—Professor Phillips stated, that he had now hopes of realizing his fondest dreams of geology. He had long conceived that Nature must have some means of conveying solid matter through solid matter, and that this was now proved by Mr. Cross, whose discoveries were of such an importance, that had the British Association been of no other service than in bringing them to light, they alone were worth all the pains it had taken for the advancement of science, and it was its particular business to have experiments like his set on foot, and prosecuted for many years to come."

On the Motion and Sounds of the Heart.

The London and Dublin Committee appointed by the British Association, have agreed in their conclusion on the motion and sounds of the heart, that they are caused by the movements of the valves, an opinion first maintained by M. Bouillaud, as recorded in our last number, (see Physiology of the Heart, p. 10.)

Meeting to carry into effect the Self-supporting Dispensary System.

The adjourned meeting on this subject was held on Wednesday evening, at the

School-room, St. Mary, Newington, Mr. Hawes, M.P., in the chair.

The Chairman briefly stated, that he had been requested to take the chair on the present occasion by several influential persons; that he came there for information, though all that he had yet heard of Self-supporting Dispensaries was in their favour; he had heard of one at Coventry, which was in the most flourishing condition; he thought they ought generally to be adopted throughout the country, the Poor Law Act had so effected the poor with regard to medical attendance, that unless some plan, like the one under consideration, was formed, they would neither have sufficient or proper medical relief, the hospitals, dispensaries, and parish surgeons of London, were not adequate to supply the wants of the poor in this respect; and he trusted that the meeting would at once proceed to facts, and agree on them accordingly; he did not see that medical men ought to oppose the establishment of these clubs, because it might seriously affect their interests, because if the great mass of the people were benefited, one section of society suffering was of no consequence.

Mr. Hooper rose, and requested the names of some gentlemen, who were stated in the circular to be formed into a "provisional committee," and who he considered had acted in a "hole and corner" manner, by carrying on the scheme without the sanction of the meeting in full, as it was understood at the last meeting nothing further would be done until the present adjournment.

This application for the names of the committee was strenuously opposed by several persons, particularly by a Mr. Waterworth, who was very angry at such a term as "hole and corner" proceeding, being applied to the formation of the committee, as it was formed at Mr. Herbert's house when twenty persons were present.

After some confusion, in which five or six persons attempted to speak at once, Mr. Waterworth, in a very excited manner, stated the names of the gentlemen who formed the committee. They were:—Mr. Leaver; Mr. Rose; Mr. Machilay; Mr. Parker; Mr. Meryon; and himself; Mr. Herbert acting as secretary.

The first resolution was now put and seconded, "That a self-supporting Dispensary was necessary to be established in the neighbourhood." This was followed by an amendment with the word, "not," as preceding "necessary," added.

There was a good deal of very wandering discussion, as it was called on both sides of the question. It certainly was not proved that a dispensary was necessary,—not a single fact being adduced to support the resolution.

A stormy, angry debate followed, which left the case just as it was, with this exception, that the supporters of the system evidently determined on carrying their plan in spite of the medical men's opposition, which they denominated factious, and called it "a gross conspiracy!!"

The meeting was adjourned.

Our views on the question were given in a leader of our last volume. Not one of our arguments against the system were overthrown, or even mentioned; and it appeared that we were perfectly correct regarding the patients of the North Western Self-Supporting Dispensary, as we find from a *printed* Report of the state of that establishment, that three-fourths of its funds are raised by *charity!*

Extraordinary Charge.—Criminal Abortion and Infanticide.—Importance of Medical Evidence and Jurisprudence.

I copy the following statements from the "Times" of Friday, Sept. 9th, 1836; and they are of intense interest to the medical profession as well as to the public. They forcibly prove the vast importance of medical evidence in criminal proceedings, on which the honour, reputation, liberty, and life of an accused individual may depend. In an original work on Medical Jurisprudence, I have described the moral and criminal law respecting abortion, and the depravity of destroying the fœtus in utero at any time from the moment of conception to the period of parturition, and I have defended the wisdom of our law on the subject, contrary to the opinions of some of our ablest medical authors now living. But I have also shown that a charge of criminal abortion may be made against an innocent person, and that his liberty and life, or his confinement and death, will be decided, in certain cases, on medicel evidence only. The following case is one of this description, and on the grounds of humanity and medical science, I offer a few comments upon it. I know nothing whatever of the prosecutrix or accused, or of their connexions, law advisers, or acquaintances.

"On Thursday, Sept 8th, the magistrates assembled at the Green Man, Blackheath, Sir Thomas Maryon Wilson, bart., in the chair. Considerable interest was excited in the locality, as it was understood some circumstances connected with the charge that was preferred against John Frederick Parker, Solicitor, late of Lewisham, would transpire. No further particulars were, however, made public," says the reporter of the Times, "and we could not obtain any additional facts. We had delayed the publication of this extraordinary statement, for the purpose of examining thoroughly into the matters it contains; but after every inquiry, we feel ourselves now justified in giving it publicity."

The accused is Mr. John Frederick Parker, of the firm of Messrs. Parker and Sons, professional gentlemen, residing at Lewisham, and who have an extensive connexion with the nobility and gentry of the county of Kent, besides holding a number of official situations in the locality. The accused was clerk to the Lewisham bench of magistrates, and also held the appointment of clerk to the commissioners of taxes for the county; which situations are said to have yielded between 1500*l.* and 2000*l.* per annum.

The lady who brought the case under the notice of the legal authorities, is the widow of the late Mr. Boys of Lewisham, and eldest daughter of Mr. Tanner of Norwood, who holds a lucrative situation in the Customs. The case has not appeared in any of the local or county journals, although at the time (near two months since) the fact of the charge having been made, was generally known in Greenwich and other neighbouring towns of Kent. The reporter of the *Times* has seen the official documents, of which he asserts that the following is their substance.

"Mrs. Boys, accompanied by Mr. Lester, a professional gentleman residing at Lewisham, appeared, in the first instance, before Messrs. Brandam and Jackson, two of the county magistrates, at the house of the former, at Lee, for the purpose of making out a sufficient *ex parte* case to obtain a warrant for the apprehension of Mr. Parker for child murder. Mrs. Boys stated that she had been delivered of several children, of whom Mr. Parker was the father; that one of them, when a few days old, was taken away from her by Mr. Parker, under the pretence that it was to be confided to the care of a wet nurse, and she had been since told by Mr. Parker and Mr. Hollist, a medical gentleman at Lewisham, who attended her (Mrs. Boys) during her confinement, that the child was dead, but that she had subsequently ascertained that the child was living; that Mr. Parker was paying 16s. a-week for its maintenance, through Mr. Hollist, and that letters concerning the child were addressed to Mr. Parker under a feigned name, to the house of the medical gentleman; that she (Mrs. Boys) in consequence of what had afterwards occurred (referring to the shocking event hereafter detailed), had reason to fear for the safety of the child, and consequently applied to the bench for interference."

The second and most serious charge against Mr. Parker was then stated; and the information of Mrs. Boys was taken upon oath. It was to the effect that she was pregnant by Mr. Parker, some time since; that Mr. Parker had purchased some medicine and induced her to take it for several weeks, for the purpose of procuring abortion; that the drug did not have the desired effect, and she was persuaded by him to go to town to be confined; that she did so, and was conducted to apartments previously engaged by Mr. Parker, and introduced to a foreign medical man (a German it is supposed), in a darkened room, and he performed an operation upon her with an instrument, and took the child, of which she was pregnant, from her. That during the whole time she was undergoing the operation, Mr. Parker was present. She afterwards sank from exhaustion, and fainted, and on recovering she asked for her child, and was told that it was dead and buried.

A warrant was granted against the accused, he was arrested, and required to give bail for 1,000*l.* for his appearance on a future day before the bench. A day was fixed for the examination of Mr. Parker, when a full bench of magistrates assembled at the place above stated. Mr. Clarkson the barister appeared for the accused, but Mr. Parker did not appear, and his bail was declared forfeited. Mr. Hollist attended for the purpose of exonerating himself from any criminal charge by producing the child first referred to.

The admission of Mr. Parker to bail, when in custody on a capital charge, has caused much speculative conversation in the neighbourhood, and the solicitor for

the prosecution is said to have expressed his regret, that he did not cause the examination to be taken before Sir F. Roe, at Bow Street. The forfeited recognisances have not been paid in consequence of some legal informality in them, of which Mr. Parker's friends intend to avail themselves.

No clue has been obtained respecting the foreign medical man, who performed the operation on Mrs. Boys in town.

It is also stated that she is now staying with her family at Norwood.—*Times* September 9, 1836.

Appended to this report is a letter by Mr. James Lester, whose name is mentioned above, in which is the following passage.

"I certainly did not think there was one attorney on the rolls who, knowing the circumstances that have been lately mooted in this neighbourhood, would have recommended this unhappy lady to thrust herself so unnecessarily into public notice, and certainly her greatest enemy could not have recommended a course more opposed to her real interests." This purports to apply to a letter in the *Times* of the 1st inst., signed E. S. Boys.

A description of the accused is given from posting bills.

The said John Frederick Parker is about thirty-five years of age, about five feet seven inches high, fair complexion, light hair, sandy in front, full whiskers.

The history of the foregoing extraordinary charge of felony appears to me extremely unsatisfactory and inconsistent.

The prosecutrix avows that she has had several illegitimate children by the individual whom she first insinuates as having removed one of them, and she feared for its safety. This was disproved afterwards by the production of the child; and it appeared that the reputed father paid 16*s.* a-week for its maintenance. It is not difficult to understand that he wished it to be reared by some one else than the mother. Then comes the story of administering abortive medicine for several weeks to procure abortion. There is no medicine that I know of, and I shall thank any one who will inform me of such, that possesses that power after exhibition for several weeks. Lastly comes the dark room, and the supposed German medical man. Any well-informed obstetrician can estimate the probability of this fact. What operation was performed,—was the perforator used, the forceps, or lever?

A few eminent obstetricians would explain this point, and most probably, in my opinion, fully exonerate the accused.

M. Ryan, M.D.,
Lecturer on Midwifery and Medical Jurisprudence.

Great Queen Street, Westminster,
Sept. 9, 1836.

CHARING CROSS HOSPITAL.

Mr. Pettigrew, the senior surgeon of the Charing Cross Hospital, has published an address to the governors and subscribers of that institution, denouncing certain proceedings that have lately taken place there, and the mode in which the business of the hospital is administered. This appeal seems less a cry of distress uttered on account of the *desagremens* he has himself endured, than a strong and indignant plea on behalf of the objects of the charity. Making all due allowances for the want of system, the irregularities which might take place, and we will say to a great extent excusably in a hospital so recently established, Mr. Pettigrew makes out a strong case, on the score of negligence and mal-administration. His statement, however, is *ex parte*, and its effect may hereafter be modified by the defence of the parties whose conduct it impugns. We must, however, add, that Mr. Pettigrew does not attack motives; he denounces acts, which, for the sake of the institution, must be severely sifted. We copy the following instance from Mr. Pettigrew's address:—

"The crutches of the hospital are purchased at two shillings a pair, and as it was found that some of the patients, after being permitted to take them out, did not return them, the director ordered that all the patients going out with crutches should leave a deposit of *a shilling*. Now, look at the effect of this. I will give it in a case: A poor man, a labourer, met with an accident in the course of his employ, and fractured his leg. He remained seven or eight weeks in the hospital. The union of the broken bones being perfect, I recommended

him to return to his family. The sister of the ward asked '*What he was to do about the crutches?*' I was ignorant of the order that had been given, and replied, 'why take them to be sure, and when he is able to get about without them, let them be brought back to the hospital, for some other afflicted person.'—'Sir, Dr. Golding says that a shilling deposit must be left, and the poor man has it not.' He had not a shilling in the world. I paid the deposit, and bade the man not care about the crutches."

Here is matter for investigation! The charity of some thousand benevolent individuals, in the midst of the civilization, wealth, and philantrophy of this great city, the most renowned in the world for carrying largely and nobly into effect the precepts of Christianity, unwilling to be taxed *one shilling* for a pair of crutches!!! We should fain hope that Mr. Pettigrew, in making this statement, has allowed himself to be imposed upon. If, unfortunately, it should prove true, the establishment in which such a transaction could occur is tottering to its base. Talk of crutches forsooth! it must be on its last legs.

But it is too serious a subject for jest. The governors and subscribers must interfere to save the institution. Mr. Pettigrew has assumed a bold attitude; if he can sustain it, by substantiating his charges, then will he be entitled to public gratitude; and it is but fair to add, he does not attempt to conceal any thing, or shrink from inquiry. He admits to their fullest extent the counter-charges against him of having received 500*l.* from Mr. Howship for admitting him to the second surgeonship of the hospital. It appears that by the consent of the other officers, and as a reward for his twelve years of zealous and unrequited exertion to promote the foundation of the hospital, Mr. Pettigrew had the right of naming his colleague, who should not for a fixed period be entitled to any share of the fees for pupils' attendances, on one condition, namely, that the person introduced should be acceptable to his fellow officers. Mr. Howship was received and appointed by the governors, on Mr. Pettigrew's presentation; a private, but by no means a concealed transaction, now took place between Mr. Pettigrew and Mr. Howship, in virtue of which, the latter, instead of remaining for the stipulated period without receiving any portion of the fees, should, on the payment of 500*l.*, be at once entitled to equality of rank and remuneration. For our own parts, so long as medical appointments to public institutions shall not be made in accordance with the mental trial, we mean a well regulated system of *concours*, we see no immorality in the transaction, and it would be sheer affectation to deny that appointments are thus procured daily. The concours is the only mode by which our public hospitals can be relieved from the inconveniences constantly arising out of this close, and (to the institutions themselves and the public) most prejudicial system of electing officers.

The director, being himself a medical officer of the Charing Cross Hospital, is placed in a very anomalous position. Dr. Golding has strong claims on the institution. The hospital owes in a great measure its foundation to him. He has "seen it in its cradle, and watched it to its maturity," but he should take care, now that all other difficulties have been smoothed down, not to strangle it by an injudicious and stingy plan of economy. Medical men are of all persons the most inefficient administrators of public institutions. Dr. Golding should look to this; his interests, and possibly his reputation for common sense are involved in it. Directors, generally speaking, in such institutions serve no good end; they are common *marr-alls*. Mr. Pettigrew is not alone in this unhappy business. Dr. Sigmond, whose character is above the breath of reproach, seconds him in the warm expression of his dissatisfaction and disgust.

THE WESTMINSTER HOSPITAL.

It is pleasing to record the liberality of the present government towards the Westminster Hospital. The governors and trustees have applied for a return of 6,000*l.* paid by them to the Commissioners of the Woods and Forests for the site of the new hospital in front of Westminster Abbey. They ground their claims upon strong grounds, that in consequence of their having expended 30,000*l.* upon the building of the new hospital on a spot of ground for thirty years unproductive to the Commissioners, that their funds are so exhausted that one-half of their wards are at present unoccupied, although daily applications are made for assistance which they cannot afford. The trustees further complain, that by a condition attached to their lease, they were compelled to complete the building in such a style of architecture as to harmonize, as far as possible, with that of the Abbey, by which the funds of the charity have been greatly diminished, and the sphere of its usefulness considerably contracted. The whole case has been submitted to the Chancellor of the Exchequer, who takes a deep interest in promoting public charities; and it is confidently expected that the premium or fine will be returned.

Kite-Carriages—New mode of Conveyance.—Life-Preservers in Shipwreck.

Mr. Pocock submitted his kite-carriages to several members of the British Association for the Advancement of Science, at the late meeting at Bristol. The car, which contained four persons, was drawn by two kites, the pilot kite ten feet in length, and the draft one twelve feet. The ordinary pace was about ten miles an hour. When the wind was strong, the pace was twelve miles an hour. More than a hundred persons travelled a short distance in these new vehicles. Various observations were made as to the different uses to which these kites, or buoyant sails, might be applied. The general impression was, that this invention was peculiarly adapted to sea-service, especially in case of shipwreck, as life-preservers, as auxiliary sails, and also for the making of signals in the time of distress.

Preservation of Animal and Vegetable Substances.

Dr. Macartney made some observations on the preservation of animal and vegetable substances from the attacks of insects, at the British Association, on Wednesday, Aug. 24th ult. He stated that he employed a concentrated solution of equal parts of alum, nitre, and common salt, mixed with an equal quantity of proof spirits, and a little oil of lavender and rosemary. The injection of this fluid into the arterial system would perfectly preserve a dead body for three or four months fit for dissection, and portions of one which had been thus injected, if rubbed over with pyroligneous acid, might be preserved for any length of time. He recommended a coat of plaster of Paris to be daubed over succulent plants as a mode of preserving them, and when dry this might be easily removed. He noticed the entire preservation of some bodies found in the bogs of Ireland.

Medical Clubs.

An attempt is now being made in Essex by the Board of Guardians of the Halsted Union to adopt the system of medical clubs; the benefits to be secured to paupers and the labouring classes only. We regret to see the tender system introduced into a liberal profession: should it continue, it will lower the faculty to the grade of the scavenger, and such like contractors. What a falling off is here, my countrymen!

Death of Dr. Henry, of Manchester.

It is with sincere regret that we record the death of Dr. Henry, of Manchester, which occurred on Monday last. On his return from the meeting of the British Association at Bristol, he appeared to be unwell and dejected. There is reason to fear that temporary bereavement of reason led to his death. In him science has lost a zealous and distinguished friend.

IMPORTANCE OF TEMPERANCE SOCIETIES.

Sudden Deaths and Suicides in Russia.

St. Petersburgh, Aug. 6.—The official reports show that during the year 1832, 405 individuals (324 men and 81 women) suddenly; and in 1833 the number was much greater—569, (353 men and 216 women). The total number of deaths during these two years was 667 men and 297 women. The proportion of men compared to that of women was $2\frac{1}{2}$ to 1. It is remarkable, that a large proportion died of intemperance; and it is stated that it rarely happens in St. Petersburg and the other large cities in Russia, that public rejoicings do not occasion the deaths of several individuals. Thus in 1833, 78 men and 24 women were found dead in the streets from drunkenness and cold.

It is known in Russia that those who are so imprudent as to sleep in the open air, after having drunk strong liquors to excess, never awake.

From 1831 to 1833 the number of suicides in St. Petersburg were 104. It was remarked that the youthful portion destroyed themselves with cutting instruments or fire-arms, and the aged by drowning or hanging.

The Jacksonian Prize.

The Jacksonian Prize for the year 1835, by the College of Surgeons, London, has been adjudged to *Frederick Ryland, Esq.*, of Birmingham, for a disputation on "Injuries and Diseases of the Larynx and Trachea, and their Treatment."

A Literary (Medical) Curiosity.

In the Danish Medical Journal, *Bibliothek for Læger*, No. I. for 1836, Professor O. Bang, of Copenhagen, has published an *Essay on the Pathology of Diseases*, in the form of a Poem in rhyme! It consists of forty-three octave stanzas, and is entitled, "*Livets Kamp med Dæden eller Sygdommens Oprindelse.*" We are informed by those who are better critics than we pretend to be in such matters, that the poem is really a valuable one, and that the verses are both harmonious and graceful, even where they have to treat of the most trivial circumstances. The medical principles inculcated in the poem are purely Hypocratic, the author deriving all diseases from the efforts of nature to remove what would injure or destroy the body. If Dr. Bang had not preferred being an excellent physician, he certainly might have become a famous poet.

ERRATA

In Mr. LABATT's paper, inserted in the Journal for the 16th of July, 1836.

In page 794, column 1st, line 12th, *for of the* columnar portion, read *or* columnar portion.

In the same column, line 19th, *for* the long diameter (varying according to the region, &c.) *read* (the long diameter varying according to the region, &c.)

In the same page, column 2nd, line 20th, *for* 15th Dec., *read* 5th Dec.

In page 797, column 1st, line 6th, *for* Mr. Willis *read* Mr. Hilles.

In page 798, column 1st, line 1st, *for* huge-joint *read* hinge-joint.

CORRESPONDENCE.

C. M. We are much obliged for the offer, and are always ready to insert such communications which bear sterling marks of sound practical experience.

AN OLD SUBSCRIBER. We shall attend to the hint, and such irregularity will be avoided in future.

A FRIEND. The British Medical Almanack contains the whole information.

All communications, books for review, and advertisements, to be forwarded (postage free) to E. COX, Medical Bookseller and Publisher, St. Thomas's Street, Southwark; or to the EDITOR, 4, Great Queen Street, St. James's Park, Westminster Abbey.

MANCHESTER MEDICAL LIBRARY

THE

London Medical and Surgical Journal.

No. III. SATURDAY, SEPTEMBER 17. Vol. II.—(1836).

THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE VI.

Treatment of Strangulated Hernia continued.

Having so far considered the topical means belonging to the operation by the taxis, I propose, in the next place, to review those which, from their influence on the system, at least in a great measure, may be regarded as remedies of more general action. Amongst these, venesection claims precedence. It is the most valuable auxiliary we can employ; there is no period of the inflammatory stage of strangulated hernia in which it may not, or rather in which it should not, be prescribed. The earlier it is used the better, and the further it is carried without risk to life, the more decisive the advantages which are secured. We are to bleed until faintness is produced; we desire to make a considerable impression, and approaching delirium informs us that we have done so. The wish to prostrate the resistance opposed by respiration and muscular action to our increased efforts. We desire to prevent inflammation, to diminish it, to remove it. We endeavour to relieve the parts of their congestion, and all with a view to the return of the protruded intestines. The moment of collapse is favourable to our manual exertions, and these should be steadily continued as long as the debility endures. We take blood from large orifices that we may take it suddenly; and we measure the quantity by the effect. Where there is powerful strength, we bleed while the person is in an erect posture, our end is thus often speedily obtained, and we may hasten its arrival by a warm bath at the time of venesection.

The more recent the hernia, the more rapid the symptoms of strangulation; the more tender the tumour, the greater its tension; and the more the abdomen is engaged, the greater is the demand for full and efficient venesection. In many instances it may be safely postponed until the miscarriage of our first attempts points out its necessity. But in the circumstances I have mentioned there is no room for delay, and their operation should be premised before all our proceedings; without it, you can scarcely hope to succeed—neglect it, and you will find occasion to regret the mischievous omission.

If I have pressed this remedy upon you with earnestness, I have done so because I have formed a high estimate of its value. However, my reliance reposes rather on its antiphlogistic power than on its immediate efficacy as a direct promoter of reduction. In this point of view it is certainly much inferior to other remedies; nor can I now recollect a single case of acute inflammatory strangulation in which, unaided by other means, it can be said to have fulfilled the intention for which it was specially prescribed. Still I repeat, it is an important adjuvant to the taxis, a prime antagonist to inflammation, and the best preparative I can send before all our future proceedings.

Surgeons act as if they could not feel justified in taking any operative step without giving a trial to the depressing effects of tobacco. By its action on the nervous system, it paralyses muscular power; its effects are vertigo, sickness, weakness, loss of vision, vomiting, looseness, cold sweats. You perceive it is followed by consequences nearly resembling those which the hot bath and venesection produce, and we avail ourselves of these

in the way you already understand. It is administered by the anus. Formerly, when I entered upon practice, the fumes were employed, but the effects were uncertain: in some instances they exceeded the limits of safety, and in other cases they fell short of what was desirable. The infusion has been substituted for the smoke. The best proportion is, from half a drachm to a drachm to a pint, infused for ten minutes, and then strained: the latter strength should not be exceeded. A second injection should never be administered until a sufficient time has elapsed to show the inefficiency of the first.

Aperient glysters, from the mildest to the most stimulant, from those of ordinary quantity to three or four times their bulk, are frequently thrown into the larger intestines. You know the syringe which has been introduced into modern use; it is an instrument of much power, and will urge the fluid to a considerable distance beyond the rectum if it be properly employed. The first injections empty the larger bowels, and perhaps they excite a peristaltic movement in parts of the canal beyond their immediate reach. It must be some notion of this kind that leads to their frequent repetition, for I have known them to be ordered every hour, although they ceased to bring away a particle of fæculent matter. Some have placed confidence in the distension they produce, and by it they have hoped to draw back the protruded viscus from its preternatural position. Could such a result arise I must have seen it in those days alluded to, when the bowels were inflated to a formidable height; and surely it might be expected to occur when tympanitic distension gives an alarming magnitude to the abdomen. To unload the larger intestines is both necessary and useful; and with such a view injections may be administered. But after this is accomplished, I must dissuade you from a repetition, which is profitless, which encourages delay, and harasses the patient by the disturbance it produces.

Purgative medicines were for a long period freely advised in the treatment of strangulated hernia; they were deemed applicable to those cases in which the pervicusness of the intestinal canal was not completely interrupted. Their irritant properties, it was hoped, would exalt the peristaltic action to such a degree, that it would be sufficient to disengage the displaced and constricted part, while it was further expected that their usual operation would contribute to suspend and to diminish inflammation.

I believe, however, there are at the present day but few who imitate such a practice. I do not intend to be understood to say, that it is one which should never be pursued; because there really are some cases in which it may be admitted; these, however, in some essential points differ from those about which we are immediately engaged. The state of the stomach is favourable to the rejection of the mildest and least nauseous substances, and it is not likely to be improved by any medicine of the purgative class. But, even if we suppose them to be retained, and that the contents which they disturb and the secretions they excite do not find a passage by the anus, you easily perceive they must accumulate above the stricture, heightening the abdominal distress, increasing the disturbance of the stomach, and adding to the inflammatory symptoms which already are progressive. When you meet with a case which invites you to employ them, you will of course select such as are least likely to awaken nausea; you will begin with small quantities, and you will repeat the dose with proper frequency. You may commence with a few grains of calomel, and a few drops of laudanum, in the form of a pill: the opium contributing to allay the irritating of the stomach, without interfering with the aperient qualities of the other ingredient. In this way a scruple of calomel may be taken in two or three hours. Its action may then be assisted by some liquid medicine. The sulphate of magnesia, with the infusion of roses, largely acidulated, is the best I know of. Rochelle salt, the tartrate of potass and soda in effervescence, sometimes answers very well. Drastic medicines will scarcely at any time be borne, and if once rejected they should never be renewed, no matter with what skill the ingredients be selected, or the formula compounded.

Having now reviewed the merits of the different agents which may be called to the assistance of the hand, I must entreat you not to place too much confidence in a plan of treatment which experience teaches me will often lead to consequences more serious than mere disappointment of success. I imagine I can form a proper estimate of the power of the taxis; I know it is adequate to rescue from danger, and that in a great many instances it will render unnecessary a very serious surgical operation. These

advantages, I acknowledge, often follow the judicious employment of the taxis; but, gentlemen, I desire to caution you against its abuse; and I say it is abused whenever we apply it to cases which it cannot serve, and which it must, therefore, inevitably injure. I say it is abused when the scene of repetition is acted over and over again—I say it is abused, when it contributes to delay an operation which no circumstance should be allowed to procrastinate. "Let us try the taxis for some hours." This is a proposal frequently made. Too often it originates in indecision, and is satisfying to timidity. A postponement of six hours, consumed in these trials, has consigned many to their graves. We must learn to abandon this course of ruinous proceeding; we must hold in view the state of things described in the last lecture, and when those exist we should instantly operate. Remember the consequence of the disease is certain death, and that life can be preserved only by a well-timed operation, performed skilfully. The attendant dangers are comparitively inconsiderable. It is not the operation that destroys; it is the inopportune occasion in which it is performed. This assertion is stamped on my conviction; it is justified by the success which I can personally record.

But to resume. The taxis fails; the scalpel is the next and only resource. The patient may not submit; and obstinacy has sometimes opened to me a page in which we can read a history of the course of the disease as it advances to a fatal conclusion. The symptoms detailed at our last meeting increase; vomiting is more frequent; it is performed by a declining effort; the mouth is filled with the contents of the stomach. These are often retained until the patient turns round to deposit them in a convenient receptacle; there is no dry straining; the stomach, at one act, is each time emptied, and is then quiet, until it is again supplied either with drink, or those fluids which may be passed into it by an inverted peristaltic motion of the intestines. Now, both from their appearance and odour, we can recognise fæces in these discharges. Some have doubted this fact, reasoning anatomically; I will not moot the point; I will be satisfied to appeal to experience. The eye may be mistaken, but another sense, less likely in this instance to be deceived, will confirm the justness of the observation—the pulse, becoming more frequent, hard, and small; the abdomen more tender, swollen, and tympanitic. Fatigued by the previous discipline the patient desires repose, complains of weakness, and is despondent; a moisture rather warm prevails upon the trunk, but the extremities are cold. The abdomen is hourly stretched into more fulness, and into tympanitic elasticity. It often reaches to an enormous size. Sometimes the distension is equal, and then, I dare say, air or gas occupies the peritonæum. Sometimes, again, the surface is unequal, and we trace the convolutions of the inflated intestines as they swell into prominences through the strained and unresisting abdominal parietes. In such cases air has not reached the general cavity; in both, the swelling is distressing, and it constantly forms the most pressing circumstance of complaint. But let me remind you, matters are not always thus; for I have told you I have seen exceptions—the hernia advancing to a fatal termition, while the abdomen was almost preternaturally soft and flaccid. As yet mortification may not have taken place; the symptoms I have mentioned are by many considered to be evidence of its presence; however, I have seen it to be otherwise, and when death has succeeded those appearances, I have not been able to detect a single trace of gangrene—the inflammation kills, mere inflammation will destroy, when no hernia exists; and why shall we deny it the same destructive power when that disease is present? Well, but mortification does take place, and now the question is as to the situation in which it first takes place? You would say in the abdomen. This, however, is not really the case; the hernia generally is the first to suffer, and all we observe besides is usually consecutive. When it is said, "mortification has taken place," we speak with reference to the part; what I may call primary abdominal mortification, leads to a much more sudden issue; confined to the herniary part, the fatal event is often surprisingly delayed. When you reflect on the importance of the organ concerned, on the speedy termination of cases of intestinal injury, and upon the information you derive from books upon such subjects; if you think, as I once thought, you will imagine that death hurries on with great rapidity. So far the conclusion is just. Yet, I alluded, indeed, I more than alluded, to a case in which a man, at the end of three days' duration of strangulated hernia, walked to my honse with an extensive gangrene of a protruded bowel.

He never lay down; he did not suspect the rupture to be the cause of the urinary retention which he applied to me to relieve. This is unquestionably a case in illustration—that although mortification, in certain cases, ends in speedy dissolution, there are some cases in which an intestine may mortify, while death does not instantly arrive. You are frequently informed, by every authority, that mortification is one of the terminations of inflammation. You are also told that there are certain phenomena, both local and general, which mark the precise period of its occurrence. When matters are advanced, I acknowledge the evidence to be conclusive; but I confess I am not aware of any set of symptoms which lead to more than a suspicion that mortification is setting in. Well then, I say the general or abdominal appearances are not fully declaratory of mortification having taken place; we must look for other proofs. The history we are pursuing will furnish us with these. From what we have seen, doubt cannot be altogether reprehensible. In these cases, local change alone usually clear up the difficulty, and afford that fulness of assurance which suspicion may have conjectured.

It has been already remarked, that the more a hernial tumour is involved in inflammation, the greater in general will be the thickening of the adjoining structures, and the more perfectly will its contents be concealed from examination. Now, when grangrene takes place, all beneath is observed by the external swelling. To the hand, it feels in some parts œdematous; in other parts elastic and even crepitating like an emphysema. Points which were exquisitely painful when touched, lose their sensibility, while the surrounding parts preserve their inflammatory firmness, and are still tender to the finger. Superficial redness to a certain extent changes to lividity, and dark coloured vesicles arise, there break, and the cuticle is easily rubbed away. When things arrive at this stage sweat is more general and profuse. It is warm on the trunk—it is cold on the face and extremities. It emits a peculiar odour and possesses an unusual viscidity. It is the clammy sweat of approaching dissolution. The countenance undergoes a remarkable alteration. The experienced pencil may point the expression with which it speaks, but language must for ever fail to impart to the mind an adequate idea. There is a something which we observe, that can never be forgotten. While I address you, the lineaments stand before me in awful portraiture of impending death, and memory takes me back to those scenes from which my first impressions were received.

The pulse grows more frequent and more compressible. Respiration is so hurried, that a sentence cannot be pronounced without unusual interruption. Hiccup, although a commonly distressing symptom, may exist without the patient's consciousness of its presence. Its occurrence is often denied even for many hours after it has alarmed the attendants on the sick. It is sometimes loud as it is in health; again, it is performed so silently, that it is known rather by the agitating jirk which accompanies the effort, than by any sound plain enough to be attractive—grouped with the other symptoms, it portends the issue which they predict; uncombined with these, it always claimed attention, and yet it may not indicate either mortification, or even its immediate approach. You are to understand, that hiccup attends many derangements and diseases; when there is acidity of stomach, we often find it. It seems to depend on flatulency, and it often occompanies the various forms of dyspepsia. We meet with it in persons afflicted with worms—we are assured that it frequently arises from different kinds of intestinal irritation. Hiccup sometimes succeeds surgical operation, or perhaps is produced by such diseases as render these operations necessary. I performed paracenthesis of the bladder in the case of Mr. Aston, violent singultus took place, produced considerable apprehension, and yet nothing out of the usual course occurred, all going on to a favourable termination. Colonel Edwards was the subject of a similar proceeding. A few hours after he had been relieved, incessant hiccup appeared—he made no complaint, while my mind saw nothing except danger in the symptom. An opiate put an end to the source of my alarm, and in a few days every circumstance bore a most promising aspect. Now the superventive of this symptom is in these last instances to be explained; you are not to ask me to determine, I adduce these cases not to inspire you with confidence in the inaccuracy of the symptom, but to guard you with the shield of caution, and to teach you the propriety of reserve in all cases in which you do not fully see your way by the assistance of united appearances. I have met with many cases

in which the hiccup ceased as soon as the bowel was returned, and I have seen several accompanied with severe singultus almost from the earliest period of strangulation recover with most unexpected rapidity.

When mortification follows high inflammatory action, there is usually delerium. Accordingly you are only to look for it here, but, I dare say, you calculate upon its being one of the earliest evidences of the change which has taken place. Well, if you think so, you have fallen into an error; for delirium is often absent until a very few hours before death. In a jurisprudential point of view, the fact is one of importance. I have, known persons who were perfectly adequate to transact all their affairs nearly up to the last moment of existence, and, again, I have seen others whose minds were clouded from the first instant, who seemed torpid, careless, and who were with difficulty roused from a state of drowsy stupidity, which threw confusion into all their attempts at a testamentary arrangement. To return for a third time to the case of the hernial patient who came to my house with the intestine in a gangrenous condition. We have here a proof that mortification of such an essential part may exist, unaccompanied by any mental aberration. But then you are to bear in mind, that in this case there was no previous inflamatory action, and that the gangrene was entirely owing to a sudden and total obstruction of the circulation.

I have more than once said, that a patient must die unless the strangulation be relieved; and this is incontestably true. Cases of what are called spontaneous cures, cannot with propriety be adduced in opposition to the assertion, because, if these are properly considered, they will be found to be cases in which nature accomplishes a cure by removing the strangulation. What we expect at one time by the taxis, and at another time by the knife, she brings about by a severer remedy. Inflammation, gangrene, abscess, sloughing, are the instruments she employs. She sets up adhesion at the abdominal boundary of the tumour, unites the intestine to the surrounding structures at or near the orifice by which it descended. She closes the communication between the gangrened parts and the cavity of the peritonæum, prevents the internal effusion of fæces, and provides a new and external outlet for the contents of the intestinal canal. The steps by which this wonderful provision is secured, I will trace on some future occasion. For the present I return to the subject more particularly under our consideration. With this subject I shall commence my next lecture.

An Abstract of Original Views on the Functions and Diseases of the Intestinal Canal, with an Examination of such Objections as have been urged against them; and a further Report of their successful practical application. By James O'Beirne, M.D., Surgeon Extraordinary to the King, one of the Surgeons to the Richmond Surgical Hospital, Dublin—(Read at the Medical Section of the British Association, August 14, 1835.)

(Continued from vol. i. p. 979.)

But, in order to present another view of the subject, and to omit no kind of evidence that can be brought to bear upon it, I beg leave to refer to a very analogous case described by Doctor Ricord.* It is one of congenital malformation, in which the anus was absent, and its office performed by a circular opening in the recto-vaginal septum. In this case, the alvine discharges passed by the vagina, and, with the exception of gas often escaping involuntarily, were completely under the control of the will. In order to keep the vagina always in a state of perfect cleanliness, it was only necessary to inject and wash it out with water, immediately after each stool; and thus the woman was actually enabled to cohabit, for three years, with her lover, without his having ever discovered her defect.

And M. Ricord expressly states that he could find no feces in either her rectum or vagina, during the space of three days. The facts of this case are strikingly in point with those of laceration of the recto-vaginal septum and the sphincter muscles of the anus, except in one respect—namely, the frequent involuntary escape of flatus. But, even in this respect, there is no evidence that the flatus so expelled had come from the colon; for no one will venture to deny that the external air may not have entered the vagina, have from thence passed into the rectum, and, by becoming rarified there by the heat of the body, be expelled in the way described.

There still remains unanswered one other observation on this, the last para-

* Journal Hebdomadaire, tom. xiii. p. 167, 168.

graph, and, made by the same reviewer. It is this. He says, "that in healthy and natural defecation, the whole consists, very frequently, of one long and connected cordon of feces." The bearing of the observation is, that this "cordon" is moulded upon, or cast in the rectum, during the gradual accumulation of feces in that intentine. But it must be perfectly clear that, no matter what shape the excrement may be of, when situated above the anus, it must necessarily assume a cylindrical form in forcibly dilating and passing through the contractile ring formed by the sphincters; and that its natural adhesiveness fully accounts for the length of the cylinder so formed. The reviewer's observation, therefore, applies to neither side of the question.

I have now answered, and I conceive, completely overturned, all the objections which have been urged against the pathological proofs of my general views, with the exception of those proofs contained in the fourth paragraph, and which respect the results of the examinations per anum, which surgeons are so frequently in the habit of making. These results, together with those which I have obtained, from experiments upon the healthy rectum, come next under consideration; and I confess that there is scarcely any point advocated in my work, upon which I am so anxious to produce general conviction, as upon this. I am much deceived, however, or my position is now such as will enable me to accomplish this object.

The point which I am so anxious to establish, is the empty state of the rectum, of a healthy person, during the whole of the period, often a long one, which elapses between stool and stool. This statement is so directly opposed to all former views of the matter, that, as might naturally be expected, it has been very variously received; and the actual state both of published and private opinions respecting it, may be said to be this: Many, considering it an inevitable consequence of the general argument, and carefully calling to mind their past experience, admitted it at once;—others who doubted at first have since found reasons for admitting its correctness;—many remain wavering in their opinions;—a far greater number denounce the statement as one totally untrue, and, in this number may be reckoned the Medico-Chirurgical Reviewer, who, as we have already seen, asserts that "it is almost as common to find feces in the rectum as water in the bladder." It is a fact, also, that the subject has given rise to animated discussions in hospitals, in dissecting rooms, in medical societies, and in our public journals. The adverse opinions are, of course, supported by numerous objections, and, as a first step towards a decision of the question, I shall take each of these objections, and then endeavour to show its fallacy, until I shall have fully refuted all of them.

The first objection is drawn from inspection of the dead body. Mr. Herbert Mayo,* in commenting upon my statements on this point, objects that, in anatomical examinations, feces are often found contained in the rectum. The reviewer of my work in the London Medical and Physical Journal, and whose criticism is, in all other respects, so very favourable, says that, "in examining bodies after death, we often find the rectum full of feces." I have known the same objection, to be advanced, also, at post mortem examinations at hospitals, in dissecting rooms, and elsewhere. But very little reflection will show, that, although the fact upon which this objection is founded, is undeniable, the inference attempted to be drawn from it, is quite inadmissible. Thus, the muscular power by which this intestine, contrasts so as to prevent the entrances of feces, is altogether dependent upon a vital principle —that principle is totally extinct at death —and then, the intestine, no longer possessing any contractile or vital power, relaxes, stands wide open, as we usually see it, and freely permits the descent of feces into its cavity. Therefore, there is no evidence whatever to prove, that feces found in the rectum after death, had been situated there during life, which, be it observed, is the inference attempted to be drawn. Accordingly, such an objection cannot be obtained, even for a moment.

The remaining class of objections is more extensive, and drawn from a more extensive source. 1st. It is objected by one reviewer, and I have known it to be objected by many other persons, that the rectum is frequently found impacted with feces in the act of parturition. It would plainly be just as fair, and of as little weight, to object that there are feces in the rectum in the act of passing a stool; for, in the act of parturition, the same efforts which are made to expel the infant, act also with great vigour upon the entrance of the rectum, force it open, and fill its cavity; while, at the same

* Observations on Injuries and Diseases of the Rectum, p. 132. London, 1833.

time, the infant's head presses upon the lower part of the bowel, and prevents the contents from passing per anum. 2dly. The fact of this bowel being found so filled and impacted with hardened excrement, as to cause obstinate constipation, is, as I know and have heard, a common objection with those who have not read my work, and who only know it through the very imperfect medium of a review, and perhaps of a very brief and hostile review. But if they had read the work itself, they would have seen that I have there noticed this fact as a remarkable exception to the general rule, and satisfactorily accounted for it, by showing that the occurrence is comparatively very rare, and never observed except in paralytic, very aged, or very debilitated and sedentary persons, in whom the muscular power of the rectum, and the irritability of the perineal muscles, are so far lost or weakened, as to offer little or no resistance to either the descent or the accumulation of the feces. It is quite idle, therefore, to persist in advancing such an objection. 3dly. The fact of the finger being soiled with feces in examinations per anum, has been urged as a strong objection by several reviewers, and also by a distinguished author, to whom I have already referred. For example, in speaking of such examinations, the Medico-Chirurgical reviewer asserts, " that the finger will *very frequently* come out of the rectum soiled with fecal matters"—the Medical and Physical reviewer says, that he does not " think it so exceedingly rare for the finger of the surgeon to be soiled with feces, when he has to examine the state of the rectum,"—the Edinburgh Medical and Surgical reviewer insists that " the finger of the surgeon, and the pipe of the injection apparatus, are soiled in a due number of cases by fecal matter,"—and Mr. Herbert Mayo, in the part of his work which I have quoted, says, " in the living body, healthy feces are as often found contained in the rectum, and in the higher parts of the colon, as in the sigmoid flexure." It is certain, also, that the same argument has been introduced into almost all private discussions on the subject, and generally with more effect than any other. It demands, therefore, particular consideration, and I shall endeavour to give it a full and fair refutal. To come at once, then, to the point, I shall show, first, that whenever the finger is soiled in such examinations, the occurrence can always be satisfactorily traced to, and explained by, circumstances peculiar to the case in which it is observed;—secondly, that the finger is never soiled when a healthy subject is so examined, except when it encounters, which rarely happens, some of the few pellets of feces, which I have described as being occasionally found in the pouch, but in no other part, of the rectum; or in the possible event of a person having suppressed a stool shortly before the examination. The circumstances to which I have just alluded as accounting for the finger being soiled, in examining persons, are numerous, inseparably connected with the question, and appear to have altogether escaped the consideration of the supporters of the objection. They are these: If the person so examined be paralytic, very old, very debilitated, or in the act of parturition, the finger will, as we have just seen, very often be soiled. In adults of delicate and irritable constitutions, especially in hysterical females—in children, particularly those having calculi in the urinary bladder—in infants, more particularly during the period of dentition—in all these cases, the mere act of introducing the finger into the anus, will often produce such violent expulsive efforts, as to instantly force open and fill the rectum, and thus cause the finger to be soiled. I make this statement upon the strength of several years of careful observation; and I feel confident that no surgeon of experience can look back and reflect upon what he has observed in such cases without acknowledging its correctness. Is it fair, then, let me ask, to urge an occurrence observed under circumstances either of disease, bodily decay, or constitutional irritability, as an argument against my views, which are strictly limited to the state of the rectum in a sound and healthy person? Most certainly not; yet such is the weak nature of the argument which has been so dexterously wielded by my opponents, and has often, no doubt, embarrassed some of my warmest and most intelligent advocates. But, not to lose sight of the point in question, it appears then, that all evidence drawn from such cases, must necessarily be excluded from any calculation on the matter at issue; and we see, both from their extent and nature, that the deduction to be made must be very large. In fact, the deduction to be made on their account, must be so large as to make it appear, that the cases in which the finger is not soiled—cases which no one has ever denied to be numerous—really form the rule; and that those in which it is soiled

are merely exceptions to that rule. That such is actually the fact, I might here reasonably insist upon, merely by appealing to my own experiments, and to the circumstance of their still remaining uncontradicted by other experimenters. But I shall take still higher ground, and demonstrate that the results of these experiments *must* be correct. For this purpose let us refer to certain facts. I have proved, that, except in the act of defecation, the rectum of a healthy person is always so firmly contracted as to require the vigorous and *simultaneous* action of the diaphragm and abdominal muscles, in order to force an entrance into its cavity. I have proved, also, that, during natural respiration, the movements of the diaphragm and abdominal muscles, by being *alternate* and so very gentle, can exert little or no force upon the firmly contracted entrance of this intestine. Let us, then, apply these facts to the situation in which the rectum of a healthy person is placed, during the interval between one stool and another. In that interval he makes no expulsive efforts—his respiration is natural, his rectum firmly contracted—and, consequently, the descent of feces is most effectually prevented. Thus we can now clearly see and explain why, in my experiments on this bowel, I have found it empty in the persons and at the periods which I have stated; and, also, why the finger should be so seldom soiled in examinations per anum. But if this simple yet forcible exposition of the matter be not considered sufficiently conclusive, an abundance of the most convincing evidence of its truth will be found by referring to the facts and cases which I have detailed, in treating the subjects of fistula in ano, excision and ulceration of the rectum, laceration of the recto-vaginal septum, and M. Ricord's case of congenital malformation. Such a reference will at once show, either that the exposition which I have just given must be strictly correct, or that the facts and cases referred to, as well as all my views of the rectum, are quite false; and few will, I believe, be disposed to adopt the latter conclusion.

Having answered, and I hope successfully, all the objections which have been urged against my views respecting the functions of the sigmoid flexure and the rectum; and having also illustrated these views, as well as those on the action of the ileo-cœcal valve by a great variety of cases, observations, and experiments; I should now show the combined action of all these parts of the intestinal canal, and to exhibit the part which each of them performs in health, and also the new and clear light which their united functions throw upon the production and treatment of intestinal diseases. But as my views on these important points have scarcely been objected to, and are treated at some length in my work, I shall only touch lightly upon such of them as are more immediately connected with the objects of this communication.

From the functions which the ileo-cœcal valve and rectum perform, it is manifest that the combined action of these parts of the intestinal canal is this, and cannot possibly be other than this, in the healthy state. The valve permits fecal matters to enter the large intestines, but effectually prevents their return into the small; while, on the other hand, the rectum as effectually ressits their further progress; so that they become, as it were, entrapped in the cœcum and colon. In point of fact, this is the action of a very perfect trap. Singular as this deduction may appear, it must be admitted either to be correct, or all my views respecting the valve and the rectum must be false. But when we find, as we shall presently, that neither the functions of chylification, or defecation, nor those of respiration, or circulation, could be carried on without this trap-like arrangement, all reasonable doubt on the matter should at once cease. By this arrangement, the alvine contents are allowed ingress, but denied either regress or egress; and, consequently, are made to accumulate in and distend the cœcum and colon, and eventually the small intestines; for, when the former become too full to admit more fecal matter, the latter must become distended. Thus, all these intestines are maintained in the only state compatible with the due performance of the all-important functions to which I have just alluded. In the first place:—By the full distension of the cœcum and colon, the contents of the small intestines are forcibly detained there, until that distension is either diminished by an escape of the flatus, per anum, or removed by an excretion; and clearly in order that the lacteals and venous radicals, which are much more numerous in the small than in the large intestines, may convey into the system the whole, if not the greater portion, of the nutriment remaining in these contents. Secondly—By the cœcum, colon, and small intestines becoming gradually more and more distended, an

urgent sense of uneasiness is produced, the diaphragm and abdominal muscles are called into action, and thus the great preservative process of defecation is not left dependent upon the uncertain operation of the will, but so provided for as to ensure its regularity. Thirdly—By being continually maintained in a distended state, all these intestines are rendered capable of affording to the diaphragm and abdominal muscles that degree of firm support and assistance which is obviously so necessary, in order to enable these muscles to alternately transmit to each other the whole force of their respective contractions in carrying on the movements of inspiration and expiration. Fourthly—By being thus closely embraced and acted upon, the distended intestines are made to press upon every point of the abdominal cavity, and so that, at every act of expiration, the blood in the great abdominal veins receives an impetus which forwards it to the right auricle of the heart, and without which it could not be forwarded; for these veins have no valves, and, except the vis a tergo, no apparent means of propulsion.

Such is the admirable perfection and beauty of the design of the Creator, as manifested in the structure of the intestinal canal; yet, how exceedingly erroneous and rude have been, until very recently, all our ideas of its nature! But I have now to turn to the great object of all my views, namely—their practical application.

LECTURES ON OBSTETRICY,

AND

DISEASES OF WOMEN AND CHILDREN,

(Illustrated with numerous Plates,)

Delivered at the Medical School, Westminster Dispensary, Gerrard-street, Soho-square. Session 1836.

By DR. RYAN.

LECTURE XXXIII.

Influence of Polygamy and Monogamy on Morals and Population.

Polygamy, or Polygyny is sanctioned by laws of eastern nations, such as are governed by the Alcoran, and by those savages who follow natural religion. Although polygamy is interdicted by our laws, it does not exist the less in the hearts of most men who profess to be monogamous, but who are no less polygamous by their actions. Polygamy naturally affords more attraction to men than to women, as it is better suited to them than monogamy, because, according to the rights of nature, but contrary to human laws, they could engender with many women while their wives were menstruating, pregnant, in childbed, or nursing. St. Augustin, Grotius, and other moralists, admit this truth, but declare it would be contrary to morals, the interests of society, and the increase of population. Nevertheless polygamy, or concubinage, is common among the higher classes in all civilised countries. The toleration of this immorality was one of the principal causes of the rapidity with which the religion of Mahomet spread in eastern countries, as the prophet allowed persons as many wives as they could support.

It is almost universally admitted that the most natural state of man is monogamy; the equality of the sexes, especially in temperate climates, domestic peace, and the social happiness which results from it, the mutual co-operation so necessary for the physical education or rearing of children, announce that they ought to be in equal number, and to concur in forming a family. It is, however, true, that by the law of nations, independently of social laws, the promiscuity of the sexes would be justifiable according to many writers (Pliny, Diodorus, Siculus, &c.), and that there are some few eastern countries in which a community of women was, and even now is tolerated. Plato wished to establish it in his republic, in which every one was considered as his parents, the young as his infants, and his contemporaries as his brothers and sisters; and this preposterous proposal has lately been revived by the St. Simonians, in France, and by Owen, in this country. It is easy to adduce many valid reasons to prove that this community of women, and promiscuous intercourse of the sexes can never be tolerated in any enlightened country. It must be obvious to the commonest understanding, that without marriage, neither paternity, nor family, nor patrimonial possession, nor division of landed property, nor legitimacy could be accurately determined; and thence it would follow that all would belong to all, every one would be benefietd in common, no one would exert himself for all his race, and the result would be a state of barbarism as in savage nations, and all the laws of society would be overturned. This perfect community of women and property, if it could take

place, could only exist among people living as savages, and among a very small number on a vast territory. Suppose the community of women was established, what man would willingly allow an infant to be affiliated to him, of which he had any right to doubt that he was the father? The woman would violate the sacred duty of nursing her own infant only; and in a few centuries the human race could not be preserved; there would also be incessant desertions of infants, and a great increase of infanticides, crimes unfortunately too common, even under existing laws, but which would be innumerable in proportion as the people and their morals became more corrupted, and where no asylums would exist for the fruits of universal debauchery. Every fine feeling of paternal and natural love would be destroyed; all cares and protection of children would be at an end, and the mortality would become so great as in a few ages, to exterminate the human race. This community of women would daily excite quarrels for those possessing beauty; for if animals, during the season of rut, or heat, contend for their females, how much more would man, who can engender at all times, and who possesses so much more power in appreciating beauty? Woman in all ages has caused contentions, and there were wars, even before the time of Helen, according to Horace.* In fine, this general confusion of individuals would debase the whole human race by incestuous unions, as is proved by those nations in which such a state is tolerated. The legitimate marriages between brothers and sisters, among the ancient Egyptians (Diodorus Siculus L. 1), caused degenerate offspring, a result also common among the Persians and Parthians (Xenephon Memorab. iv. c. 4, and Dion Prusœus Orat. xx.). These authors also state that the incest allowed by Zoroaster, between parents and children, was followed by sterility, or by the most feeble offspring, on account of the disproportions of age, and the identity of constitutions. Nature also condemns such unions; she wishes marriages between different families and nations, because these intermarriages, or crossing of the races, are the true means of improving and invigorating the species. Some of the ancient legislators framed their laws on this ground (Plutarch, Quæst. Roman. St. Augustin. City of God, &c. Vandermonde, Essai sur le Perfect. de l'Esp. hum. Buffon, &c.) Daily examples confirm the validity of the opinion. Pallas adduces the fact that the intermarriages of the Mogul Tartars with the Russians, produce very fine individuals; while Humboldt has observed, that the offspring of a negro and European is more robust and active, than that of a white with an American; because the best mode of effacing hereditary diseases, gout, scrofula, phthisis, mania, epilepsy, &c., is by the commixture of the species in intermarriages, as this corrects the defects of one individual, by the soundness of the constitution of another. The Jews, who refuse to intermarry with other nations, transmit many hereditary diseases to each other; and they preserve by this custom, their Hebrew cast of countenance in all countries.* Monogamy appears to be the law of human nature in all cold and temperate countries in which the number of men and women is nearly equal. Even in warm climates, where polygamy is legalised, it is not general, except among the rich and great, who can purchase and support many women; but the people at large are monogamous. Many proofs might be adduced, that polygamy produces more female offspring among mankind, and other animals (Hippocrates, Harvey, Willoughby, Forster, &c.), and that more males result from monogamy.

Conjugal fidelity ought to be strictly observed by both sexes for the reasons already stated; and I agree with M. Virey in the opinion, that it is unjust to require fidelity of women when it is not observed towards them; though it is true that the results in the one or the other sex, are widely different as regards the increase of population and society. Nevertheless, we now see in Italy, *cecisbeos*, in Spain, *cortejos*, sometimes replace husbands without their having any right to complain; and these are not the only nations in which husbands are equally accommodated. The people of India, Africa, Tartary, and other eastern countries, sancton a similar custom; and it is said to have prevailed in ancient and rude times, even in Scotland and England, according to Buchanan, Rerum Scot. l. iv., Polydor, Vergilius, Hist. Angl. L. x., and Seuton., in Caligul,

* "Nam fuit ante Helenam," &c.

* For other proofs of this position, the reader may consult Mr. Coombe's Essay on the Constitution of Man, considered in Relation to External Objects, 1835.

c. 40, and Sir James Mackintosh's History of England, see Lardner's Cyclopœdia, and similar customs are tolerated in certain countries with regard to marriage. These are, perhaps, derived from the laws of Moses, Deuteron. c. xxii., with respect to the signs of virginity, and the Jews still require the proofs therein mentioned. This custom still prevails in Germany, (Vallisniere, *Galer di Minen*, Schlichting), in Spain, (Ranchin *de Morb. Virgin*, Jobert Err. Popul.), it is indispensable among the Turks and Egyptians, (Perry), Africans, (Saint Olon, and Lemaire Voyages, &c.), among the Persians, (Chardin), the Arabs, according to Niebuhr, and the Asiatics, according to Sonnerat, Lengintil, and many other travellers. Nevertheless it is well known to every well informed medical practitioner, that all signs of virginity are equivocal; and that all may be present though pregnancy have occurred. I have quoted several cases in support of this statement in my works on Obstetricy and Medical Jurisprudence. The hymen may be destroyed by ulceration in infancy, or by many other causes besides sexual intercourse, and the vagina may be very much relaxed and enlarged by leucorrhœa, or vaginal mucous discharge, a disease so very common to pale, delicate individuals. But in strong healthful persons, the Mosaic proofs are generally present to a greater or less extent, and there is, in most instances, more or less pain, and more or less sanguinous effusion at the consumation of marriage.

Every physiologist and well informed obstetrician is aware of the fact, that a woman may be in labour though hymen is present. Such cases are recorded by Mauriceau, Ruysch, Pare, Meckel, Walter, Smellie, Boudelocque, Capuron, Nægéle, and many others. The effusion of blood on the consummation of marriage is no proof of virginity, as the following case incontestibly proves, the medical part of which I have heard from the physician of the family. A young lady was seduced by a professed libertine in the prime of life; she was stupified by him, either with wine or some sedative, she awoke and found herself in bed with him, when he attempted to repeat the offence he had already committed. The lady resisted, escaped from him, and finally convicted him of rape for which he was sentenced to be hanged. He was transported for life—she married in two years afterwards, and her husband was so alarmed at the effusion of blood the night of his marriage, that he consulted the family physician of his wife, who related the fact to me. In this case there was every reason to conclude, that there was a previous connexion, and most probably, that there was more or less laceration of the hymen, or of the external genetal aperture. The parts healed in due time and might have narrowed or even entirely occluded the os externum, and be again lacerated on the consummation of marriage. That such occlusions occasionally happen, I can attest from personal observation, and I have recorded examples in my work on Medical Jurisprudence. It clearly follows from the preceding facts, that the scriptural and physiological inference, that blood ought to be effused during the first sexual intercourse, is correct in most cases; but liable to numerous exceptions, and these should be remembered when giving opinions upon the subject.

These signs may, therefore, be absent, as much will depend on the age, stature, and proportions of individuals. Mankind, in general, entertain the preceding erroneous opinion on this subject, and I have in a great number of cases dissipated and removed unfounded doubts and fears excited by ignorance, which a correct knowledge of science for ever set at rest. This conclusion will quiet the mind of a suspicious husband, and cement conjugal affection, which, without it, would have been destroyed. My opinion has prevented conjugal separation in the first days of marriage, and secured the strongest conjugal affection.

Virgin purity has ever been highly estimated; and it is always certain, says Virey, that a woman is most attached to the man who has given her the first lesson of amourous pleasure; and that she becomes the most faithful wife. Daily observation confirms the truth of this remark.

It has been already observed that libertinage and polygamy have always afforded more charms to men in all ages and countries than monogamy, which every one knows offers more chances of a happy life, by constancy, fidelity, and the conjugal duties. It may, therefore, be asked, why do men act in opposition to their own interests and happiness? The reason is very obvious. An advanced state of civilization affords too many incentives to amorous pleasure. Stimulating aliment and drink, the perusal of improper works, the inspection of licentious pictures and paintings, the exhibitions

at theatres, and many other causes tend to give a precocity to the developement of the sexual organs, to excite the passions, and to predispose to the greatest excesses. Influenced by these causes, the sexes indulge in amorous pleasure long before the body is properly developed, or of sufficient strength to sustain the depressing and debilitating effects of the precocious performance of this function. The consequence is, enfeeblement of mind and body, and more particularly of the genital organs. This is also the cause of the involuntary disgust which occurs after the generative act. Men seldom refer their feebleness and disgusts to the real cause—their premature and excessive enjoyments; and they search for objects which are most likely to excite their languid powers. A strange individual offers them most charms without giving rise to the disgusts of the first. But she, too, as speedily loses her charms, becomes an object of disgust, contempt, or aversion; and another is selected, and thus they proceed until the virile power is impaired or destroyed.

In many instances, however, certain women restrain the most inconstant husbands, by love, affection, attention, proper reserve, by a variety of thoughts, reflections, and acts which make a man find many women in one only, whose mind is properly constituted. Those who do not possess these advantages cannot always secure the heart of a husband, unless his mind be influenced by religion and virtue. It has been well observed that art is as indispensable to women as virtue itself. Attention to dress, personal appearance, manners, &c. have no small influence on the passion of love, and upon conjugal fidelity with many individuals. These are contemptible in the opinion of men of mind and genius, and of all who estimate matrimony in its proper light.

STRUCTURE OF THE LUNGS.

It is necessary in a physiological and pathological point of view to have a correct knowledge of the structure of the lungs before we study their functions or diseases.

There are various opinions on the structure of the lungs, which I proceed to notice.

On incising a square inch of the lung, we find the following tissues; the pleura, externally, the cellular substance, the parenchyma or tissue of the lung, with its arteries, veins, nerves, and absorbents, the air vesicles or terminations of the bronchial tubes, and these are lined by mucous membrane. Thus there is the pleura, cellular tissue, beneath this the parenchymatous and vesicular tissue, and internal to this is the mucous tissue. All diseases of the lungs are referable to these tissues.

There is much diversity of opinion as to the existence of the parenchyma as a distinct tissue; and many modern anatomists are disposed to deny it.

Malphigi concluded, that the parenchyma of the lungs was formed by the ramifications of the bronchi.

Helvetius and Haller contended that the air vesicles were composed of cellular tissue; that they communicated on all sides, and were attached to the extremities of the bronchi. They likewise supposed that the air passed from one air cell to another, from one lobule to an adjacent one, and finally to the whole of the lung.

The opinion of Malphigi has been since established by Reisseisen and Jules Cloquet. The former instituted a number of experiments on which he based his conclusions.

1. He laid open the trachea and bronchi, and traced the mucous membrane of these parts to the surface of the lung, and found that at first it formed a simple canal, then divided into a number of small canals (canalicules), which became shorter and shorter, terminating in a cul de sac, and communicating with each other by their orifices at the commencement of their ramification, but without any communication with the rest of the lung.

This termination in a cul de sac of the minute ramifications of the bronchi constitutes the pulmonary vesicles, which placed in juxta-position, form lobules, each of which is separated from the adjacent one by a thin layer of cellular tissue, traversed by vessels and nerves.

2. He separated a bronchial tube corresponding to a lobe of the lung, inflated air by the trachea, until the lung was entirely filled; he then applied a ligature on the bronchus or tube, and discontinued the inflation.

The result which immediately followed was, that the whole lung, except the lobule which received the air from the bronchus, collapsed, and that the ligature on the tube prevented the egress of the air, which could not happen if the lobules or air cells communicated freely with each other.

3. The experimenter then isolated a pulmonary lobule, and detached it from

the surrounding cellular tissue. He inflated this lobule, and applied a ligature on its superior part, and in this condition it remained distended. He repeated the experiment under water, and did not perceive that any air-bubble traversed the fluid.

According to the dissections of Reisseissen, the pulmonary lobules are only separated from each other by surrounding cellular tissue; and that the lobular tissue is formed by the vascular ramifications of the bronchi terminating in air vesicles. The latter structure was further attested by experiment.

4. He poured mercury into a principal tube or bronchus, which was isolated as in the last experiment, and forced the metal to the surface of the lung with the handle of a scalpel. He was enabled by the aid of a simple lens to observe the columns of mercury traversing the tubes, which became shorter and shorter as well as more numerous as they are more distant from the superior divisions, until it arrived at the pleura, where the mercury terminated in globules.

On pressing a lobule thus injected between two plates of glass, the mercury compressed with greater force into the minute ramifications, exactly represents the form of the termination of the respiratory canals whose extreme ramuscles or smaller tubes resemble nodosities; and the pulmonary vesicles are like the tubercles of a cauliflower.

But lest the appearance just mentioned might be ascribed to the linear direction of the mercury, which formed false routes on account of its specific gravity, the following experiment was made to disprove such objection.

5. He plunged a fresh calf's-bladder into cold water. In a few days the lung collapsed in consequence of having been, in a great measure, deprived of air, the vesicles only containing a few bubbles. The lung was now thrown into warm water, which dilated the small quantity of air into the vesicles; and the experimenter was able to observe them distended in the midst of a compact mass formed by the other compressed pulmonary vesicles. On pressing the air towards the pleura, he perceived the same structure as in the former experiment.

Cruveilhier is of opinion that a lobule is an agglomeration of cellules and vesicles, all of which communicate and correspond to a single bronchial division, as a common pedicle.

J. Cloquet gives the following description of the structure of the lung. After the bronchi enter the lungs, the cartilaginous rings lose their form, and become irregular laminæ or layers, which constitute segments forming by their re-union a complete ring; so that there no longer exists a membranous portion, properly so called; and the bronchial divisions are perfectly cylindrical.

The segments of the bronchi are perfectly oblong, curvilinear, and terminated by very elongated angles, so disposed that they can ride on each other, and be reciprocally received into their intervals. They are also united to each other by a fibrous tissue. This arrangement in curvilinear and angular segments exists as far as the last bifurcation of the bronchi; but the size of segments begin to diminish, so that they very soon form narrow lines, and finally cartilaginous tubercles.

The fibrous and membranous portion of the tube or cylinder encroaches more and more on the cartilaginous portion, which ceases at the surface or plane of the last bifurcation of the bronchial divisions, by a tubercle which occupies the angle of this bifurcation. The last bronchial ramification is reduced to its membranous part. (Anat. Descript. T. 2).

Reissessen is of opinion that at each point of division of a bronchus, there are rings more or less complete for keeping the orifice open. According to him, the bronchi have two orders of muscular fibres similar to those in the trachea, the longitudinal and circular, which are prolonged as far as the extreme ramifications of the bronchi and the pulmonary vesicles. The experiments of Varnier confirm this conclusion. He excited the contractility of the extreme ramuscules of the bronchi, not only by injecting fluids into them, and inflating them with irritating vapours, but also by irritating their external surface mechanically.

M. Cruveilhier, and the majority of anatomists, deny the existence of fibres in human vesicles, although these have been traced in those of animals.

Lastly, the lungs contain the ramifications of the pulmonary artery and veins, of lymphatic vessels and nerves.

Cruveilhier is also convinced, by a great number of experiments, that the lobules are unequally permeable, that a moderate inflation of the lung during ordinary inspiration, does not perhaps dilate a third part of the pulmonary lobules; and that the lobules at the summit of the lung are most permeable, a fact previously mentioned by Broussais; and hence it fol-

lows that this part is more acted on than any other portion of the lung.

It is for this reason that inflammation of the summit of the lung is most dangerous, and that tubercles are most commonly found in it in consumption.

It is also in the anterior and superior regions of the chest, that the respiratory murmur is most marked in a normal condition. It is more obscure posteriorly in the corresponding part. The respiration is more blowing in the interscapular region than in any other part. This is on account of the root of the lungs and the bronchi which exist in this part being of considerable calibre. The blowing is louder in the trachea, indicating the capacity of the tube.

The respiration is feeble between the liver and vertebral column, because the lung is a thin layer in this part. The respiration is null or absent over all the extent occupied by the liver and the vertebral column, and also in the region of the heart, except in rare cases, in which the left lung covers the centre of the circulation.

When the ear is applied to the inferior part of the lung, either anteriorly or posteriorly, we sometimes hear the gurgling or bubbling noise (gargouillement) of the stomach and intestines, which must not be mistaken for the abnormal noise of respiration.

In the normal state, the pulmonary approaches the costal pleura during each inspiration, but without producing any noise or sound distinct from that of respiration.

When an individual speaks, a vibration is heard on applying the ear to the chest, which is arrested on the thoracic surface, and does not arrive at the internal part of the ear. This resonance is stronger over the root of the lungs, under the axilla, and especially over the trachea, and the vibrations seem to be propagated to the ear, which sometimes feels a disagreeable sensation, especially in thin persons or those who have a shrill voice.

These characters of the normal resonance of the voice in these parts, have a near alliance with bronchophony.

It is scarcely necessary to remark, that a medical practitioner ought to know the normal or healthful structure of every organ before he studies its physiology or pathology, so as to be able to distinguish between it and anormal or morbid changes. It is for this reason that the preceding account of the structure of the lungs has been attempted, with the hope of impressing it on the minds of young practitioners and students. It prepares them for appreciating the normal sounds of respiration, and finally the abnormal, the knowledge of which leads to correct diagnosis, prognosis, and treatment of pulmonary disorders and diseases.

Auscultation in General.

Hippocrates was the first medical auscultator. He applied his ear to the chest in some diseases, as appears by the following passage:—

"You will learn by this that the thorax contains water and not pus; and so on applying the ear during a certain time upon the sides, you hear a noise resembling boiling vinegar." (De Morbis Lib. ii.)

It is clearly obvious from this diagnostic rule, that the father of medicine was acquainted with different sounds in the chest. There is, however, no other allusion to auscultation in his works. It is remarkable in so shrewd and such an unequalled observer, that he did not prosecute this invaluable means of diagnosis; nor had any of his eminent successors to the present century.

In 1816, M. Laennec had observed Bayle apply his ear to the region of the heart during the clinical visits of Corvisart, and he conceived the idea of applying auscultation to the respiratory organs as well as to the centre of the circulation.

His first instrument was a trumpet-shaped cylinder of pasteboard. He subsequently discovered that wood was a better conductor of sound, and had a cylinder made of sixteen lines in diameter, and one foot in length, bored longitudinally to the extent of three lines in diameter, but widened at its extremities. This instrument consisted of two pieces of equal length screwed together. The enlargement at one end was filled with a cone of the same wood, which was pierced with a canal of the same size as the middle piece of the instrument. This last part was called the *embout, obturateur*, or stopper, and was only applicable to the examination of the heart. This instrument was called the stethoscope (from στῆθος 'chest,' and σκοπέω 'I examine.') It possesses the conditions of a good hearing trumpet, in a small compass. Its interior or bore ought to be of a conical shape. The immediate effect of the stopper is to equalize the diameter of the bore in all its extent, and the mediate effect is to diminish the noise.

The stethoscope has undergone many

modifications since the time of Laennec. That of M. Piorry has united with it a disc of ivory screwed on at its thoracic extremity, which he has termed *plessimètre*, and another at the aural extremity. The plessimètre (from πλήσσω 'I strike,' μετρον 'measure,') is an instrument, the use of which is to act as an intermediate sonorous body. M. Louis has introduced an instrument of India-rubber for the same purpose; but the finger is now frequently substituted for the plessimètre. (See Percussion).

M. Montdezert has contrived a flexible tube, made of goldbeater's skin, containing a spiral twist of wire, which he attaches to the stethoscope, so as to adapt it to the examination of the posterior surface of the body of a patient lying on his back. M. Raciborski has employed Piorry's instrument, with a crayon of nitrate of silver in place of the stopper. The use of this last substance is to mark the limits of different organs as determined by percussion, as will be described hereafter. It is, however, a useless appendage. The stethoscope is preferable to the naked ear in those regions of the chest to which the latter cannot be applied, as over or under the clavicle, under the arm, &c. Again, the cerebral congestion, which is more readily induced in the bent than in the upright position, renders the sense of hearing of the auscultator less acute in plethoric persons, and these will find more accuracy from the use of the stethoscope.

When the respiration is to be examined over a plain and extensive surface, as over the anterior and posterior surfaces of the chest, the direct application of the ear or immediate auscultation will be preferable to mediate auscultation, or the stethoscope, because the side of the face corresponding to the ear employed will transmit the sound by means of the superior maxillary, the malar, and cranial bones.

The auscultator should stand or sit on the same side as the region which he proposes to examine, and prevent all kind of external noises capable of distracting the hearing.

The ear or the stethoscope may be applied upon the skin, on the body linen, or over a muslin handkerchief. The instrument should be kept in exact contact with the chest, with the fore-finger and thumb of the hand corresponding to the ear employed. The ear should then be closely applied over the other extremity of the instrument.

Percussion ought to precede auscultation, as it indicates the normal and abnormal state of the organs, whilst the latter analyses the abnormal condition, and determines its nature. The researches on percussion and auscultation should be made comparatively over both sides, and over several points of the chest. Thus, if we discover a morbid condition in a point of the chest anteriorly, it will be advisable to examine the opposite point posteriorly in a diametrical direction. It is necessary to be acquainted with the normal, before we proceed to appreciate the abnormal condition. This knowledge is to be obtained by repeated experiments upon individuals of different constitutions. This information may be readily acquired in public institutions, which contain a number of inmates. But before we commence the study of auscultation, we should be acquainted with the structure of the lungs, and the functions of respiration in a normal condition. This study will enable us to appreciate the normal and abnormal states of the respiratory organs, and to obtain a correct knowledge of the pathology and treatment of their diseases.

Percussion.

The term percussion is applied to strikwith the fingers or an instrument, the different regions of the body. Its object is to enable us to recognise, by the different sounds which the organs yield, their physical or morbid condition, as regards their dimension, their form, their consistence, and density. Percussion was first introduced into general use in medcine, by Avenbrugger, physician at Vienna, in 1763. It does not appear to have been known to any physician of antiquity; and was called by its proposer *inventum novum*. The first work of Avenbrugger was published in 1770, and translated into French by Roziere de la Chassagne, and appended to his work on consumption. The translator never employed this method, and it remained for some years unknown, according to Carvisart, who commenced his studies about the period of its publication. Stoll was the first who employed it after the time of its discover; and Corvisart, on reading his works, thought it would be highly useful in the diognosis of many diseases. The method of Avenbrugger consisted in a slow and gentle percussion, executed directly upon the thorax, with the extremeties of the fingers drawn close together and elongated. These were to be covered with a glove, and

never to strike the naked surface of the chest, and he gave this advice for the purpose of avoiding the confusion of the real sound of the organs, with that produced by the shock of two naked surfaces.

Corvisart, who translated the work of Avenbrugger, percussed with the flat surface of the fingers closed together, and Laennec employed the stethoscope for the same purpose.

There are certain objections to both of these methods, as there are regions which cannot be percussed by them, as those of of the scapulæ, the mammæ, parts above the clavicles, in cases of anasarca, œdema, obesity, all which render immediate percussion inexact.

In fine, this kind of percussion will prove extremely painful, when the part percussed is erythematous, exanthematous, or vesicated. It cannot be applied to the abdomen, as the parietes will never yield vibrations sufficiently marked to enable us to appreciate correctly the state of the superficial organs, and they cannot be sufficiently depressed for the exploration of the deep seated parts. These methods are almost abandoned, except in abdominal dropsy, tympanites, and abdominal tumours.

Mediate percussion is now preferred, and this is effected by means of a small piece of ivory, wood, or India-rubber, and latterly with the fingers.

It is now the general opinion, that the finger composed of bone and soft integuments, unites the advantages of all the proposed instruments, but the plessimétre is often a useful adjunct.

When it is necessary to percuss the thorax of a thin person, the finger will be more easily applied to the intercostal spaces; and it is preferable in examining the summit of the lungs above the clavicles. In all other cases the ivory plessimétre is to be preferred, and especially in examining the abdomen, as the soft parts of the finger would still further absorb the sound of the subjacent organs, already dulled by the thickness of the abdominal parietes.

The ivory plessimetre, is to be held between the fore finger and thumb of the left hand, with sufficient force to prevent its slipping or oscillating, and then applied to the part proposed to be examined

The application should be made with great precision, and it is necessary to place the plessimètre in close contact with the part about to be examined. If a vacuum existe l under the instrument, percussion would give a sound analogous to that of a cavern in the lung.

A thin layer of linen, as the inner garment may be placed under the plessimètre, as this has scarcely any effect upon the sound produced by percussion. But the instrument should never be placed on a knitted or silk covering, or thick flannel or leather waistcoat, all of which obscure the sound, and produce the same inconvenience as when the plessimètre is inexactly applied. Percussion in made with the fore and middle fingers of the right hand united. The thumb is bent upon the fore finger, and the latter pressed against the middle finger. The extremeties of the two fingers should be on a level, and the nails should not project. The plessimètre is to be percussed with the pulpy extremities of the fingers but not with the nails. The shock should be rapid to produce sonorous vibrations. All the precautions as to the use of the plessimètre are to be observed when employing the fingers for the same purpose as this instrument. When using the fingers, instead of the plessimètre, we should always strike on the same phalanges, and the percussing finger ought to be always at the same angle with the percussed. This last precaution equally applies to the plessimètre.

In general the percussion is made on the second phalanx of the fore or middle finger of the left hand. Percussion is always to be made as uniformly as possible, and principally in comparative examinations. It must be executed with greater or less force, according to the thickness of the parietes of the regions examined, and the embonpoint and strength of the patients.

Different sounds are afforded on percussing different regions of the body; and these have been classed as follows, by M. Piorry:—

1, femoral; 2, jecoral (hepatic); 3, cardial (cardiac); 4, pulmonal; 5, intestinal; 6, stomacal; 7, osteal; 8, humoric, as in organs filled with liquid or air; 9, hydatic, as in hydatid tumours, and 10, bruit de pot fêlè, slightly cracked sound, as in caverns filled with air and having a narrow outlet,

The first six differences of sound belong to two principal classes. The sounds are son mat, *dull*, and son clair, *clear sound*, which differ in a degree. The loudest sound is afforded by the hollow, and the dullest by the solid organs.

When the sound is clear in any re-

gion it indicates the presence of air, and the resonance will be in proportion to the quantity of the elastic fluid. Hence the lungs which contain air yield a clear sound, as will the stomach and intestines, when partially or completely distended or inflated with gas.

All solid organs, on the contrary, afford a dull sound in proportion to their density and consistence. Thus the heart will yield a dull sound, but less so than the liver, and the thigh will give one much more dull than either organ. Again, if we percuss a liver in a normal state, and another which is scirrhous, the dull sound in both cases will be accompanied with greater resistance in the latter case.

Percussion of the Thorax.

The thorax is divided into different regions by auscultators, and these require to be known. Thus they describe the osteological and splanchnological, or visceral.

Before proceeding further, we must recal to our recollection the anatomy of the thorax. The diaphragm divides the osteological thorax into two parts :—

1. The supradiaphragmatic, splanchnic thorax, or thoracic cavity, containing the lungs, heart, and great vessels.

2. The infradiaphragmatic thorax, epigastrium, and hypochondria, containing the liver, spleen, and stomach.

It is important to know the descriptive anatomy of the diaphragm, as the boundary between the chest and abdomen.

This musculo-membranous partition, arched from one paries or wall of the chest to the other, has an oblique direction from below upwards, from the third and second false ribs behind, to the seventh and sixth ribs before, and completely separates the two great cavities of the body, the chest and abdomen.

The right half of the thorax contains the right lung; the left half, the left lung and heart, surrounded by the large blood vessels, which are stretched along the median line of the sternum.

The left lung is smaller than the right, and is pressed outwards by the heart, so that it only covers the left half of the diaphragm anteriorly. The other part corresponds to the heart, which is situated a little to the left of the median line of the sternum, and contained between the fifth and seventh ribs.

The anterior border of the lung is shorter than the posterior, and descends only as far as the sixth true rib, on account of the supra clavicular depression, which corresponds to the summit of the lung before, and limits the superior part of the thorax anteriorly.

The posterior border of the lungs is thicker than the anterior, and extends on the contrary, from the fossæ supraspinatæ, corresponding to the summit of the lung posteriorly, as far as the second and third false ribs, by a thinner and thinner lamina vicinal to the vertebral column.

In the infradiaphragmatic portion of the right side (right hypochondrium), the superior part of the liver is limited by the passage of the diaphragm above noticed. The superior or convex surface of the liver is, as it were, so encased in the concavity of the diaphragm, and the base of the right lung, that the posterior part of the base of the lung nearly corresponds to the level of the inferior surface of the liver. The anterior border of the inferior surface of the liver nearly corresponds to the level of the edge of the right false ribs, and limits the right half of the osteological thorax inferiorly.

Towards the median line of the sternum, in the angle formed by the approximation of the cartilages of the false ribs on each side (epigastrium), are found the cardiac and pyloric orifices of the stomach, the cul de sac of which has its direction to the left, and occupies in a great measure the infradiaphragmatic region of the left side of the thorax (left hypochondrium). The inferior and almost external part of the left side of the thorax belongs to the spleen, which corresponds to the two or three last false ribs, and its position is inclining backwards.

The stomach and spleen, together with the left false ribs, usually limit the left half of the thorax inferiorly.

It will appear, hereafter, that a knowledge of the structure, consistence, and topography of the organs, will enable us to discriminate between their sounds, whether elicited by percussion or auscultation. Thus the lungs, which are penetrated by atmosphere, and the intestines, when distended with gases, as in tympanites, give a clear sound, while the liver and spleen yield a duller sound.

Percussion of the Anterior part of the Thorax.

When examining the anterior part of the thorax, the patient may be in the upright, the recumbent or lying position;

or in the semi-erect, or sitting posture. The arms should be placed on the sides, or on the back, and the head flexed or bent towards the chest, so as to prevent the contraction of the pectoral and sterno-cleido-mastodean muscles, which would otherwise occasion a false dullness of sound in the subclavicular region.

If the patient be in the recumbent posture, he should approach the edge of the bed on the side near which the examiner is situated. The physician or medical practitioner ought first examine that part of the right lung which surpasses the clavicle superiorly. In this examination of the supraclavicular region, the patient should turn his head towards the opposite side.

The considerable depression of this region opposes a great difficulty to the exact application of the plessimètre. The fore finger of the left hand ought to be substituted for the instrument, and placed in the direction of the clavicle; the last phalanx ought to be turned towards the neck, if the operator examines towards himself, and outwardly when he does not explore on his own side. In the latter case, he may also direct the third phalanx inwards, by passing his arm behind the neck of the patient. The sound of the right supraclavicular region is clear (pulmonal) in a normal condition.

In the exploration of the infraclavicular part of the chest, the plessimètre may be employed; but in thin persons the finger will be more suitable, since its size does not exceed the distance of the intercostal spaces.

The sound of this region (pulmonal) is clear, but dull in the region of the breasts, on account of the thickness of those organs and the subjacent muscles, especially in women. For this reason percussion should be made with greater force on account of the thickness of the parietes of the chest in this region. In a normal condition the whole extent of the chest, from the summit of the lungs to the sixth or seventh rib, affords the pulmonal or a clear sound on percussion.

But from the sixth rib, or a little below it, there is a diminution of sound, the dulness of which is at first not very perceptible, on account of a thin lamina of lung situated between the liver and the parietes of the chest; but it becomes very evident when percussion is made with increased force.

But lower than the point just mentioned, the dull sound is very audible on the slightest percussion, and continues as far as the borders of the false ribs, beyond which is elicited the tympanitic or clear sound of the intestines. The distance between the points at which this dullness of sound commences, and those at which it ends, marks the height of the liver, and the right hypochondrium. By repeating percussion in a vertical direction at different distances, and always in parallel lines, and noting each point of transition from above and below the liver, we shall have an accurate idea of the superior and inferior limits of this organ.

All the points which belong to the superior limits correspond to the points of insertion of the diaphragm into the parietes of the thorax; and those points which establish its inferior limits correspond with the cartilaginous border of the false ribs, except internally, at the salliant angle of this border, where the liver passes it a little. After having percussed the right side of the chest in a vertical direction, we should do so transversely.

(To be continued.)

OBSERVATIONS ON DISEASES OF THE URETHRA.

Wounds of the Urethra.

Wounds of the urethra made by cutting instruments, as in the operations of cystotomy, the incisions made in the perinæum and in the canal itself, are easily cured. In such cases it is important to determine the exact correspondence between the incisions of the urethra and of the integuments, so as to prevent infiltration of the urine into the adjoining cellular tissue, or to give exit to any quantity of that fluid that may be extravasated. In cases of urethral wounds, a gum elastic catheter worn in the bladder will prevent infiltration of urine, and favour the speedy cicatrization of the wound. Repose and antiphlogistic treatment will be necessary to guard against inflammatory action.

When the perinæum is contused, there may be extravasation of urine; and so soon as a tumour is formed, it will be advisable to incise it, and employ catheterism, as in the preceding disease. The urine may partially escape through the opening for a few days; the part heals kindly when any part of the urethra or of its integuments is destroyed by wounds, ulceration, or gangrene: it is often very difficult to effect the cicatrization of the injured part of the canal. Dupuytren advised a catheter to be left in the bladder for several days; and when cicatrization

did not happen, Sir A. Cooper* and Mr. Earle† partially excised a portion of the sound integuments, as is done for the Taliacotian operation, united the edges by sutures, and finally succeeded. The former removed a triangular piece of the skin from the scrotum, the latter from the perinæum. In some cases Sir A. Cooper cauterized the edges of the opening with nitritic acid. When the eschar fell off, the opening contracted and soon closed. The same practice would be equally efficacious in cases of other arnormal openings, such as are designated by the terms hypospadias and epispadias.

Foreign Bodies in the Urethra.

Foreign bodies of various kinds may be passed into the urethra, as pieces of bougies, catheters, or wood, needles, ear-picks, glass tubes, the shanks of tobacco-pipes, and small urinary calculi. Any of these substances may impact the urethra, impede the flow of urine, cause complete retention and its consequences. The presence of a foreign body in the urethra excites violent pain, which may extend to the whole urinary organs, and be followed by rupture of the canal itself or of the bladder, and also by infiltration or extravasation of urine. Cases are on record in which the urethral parietes ulcerated, and urinary abscesses formed.

In all cases when a foreign body is impacted in the urethra, extraction of the substance must be effected as soon as possible. Various methods were employed for this purpose; mucilaginous and oleaginous injections were used to lubricate the urethra; metallic wires were introduced by Deschamp, Boyer, and Pacoud, while Hunter, Hales, and Desault preferred a urethral forceps, which was afterwards very much improved by Sir A. Cooper. The first step to be taken for the removal of a foreign body in the urethra, is to fix it, if that can be done, and in some instances an assistant must pass his finger into the rectum for that purpose. The forceps is to be introduced in its canula, or with one blade over the other, as proposed by Sir A. Cooper, and the blades separated when in contact with the extraneous substance. By slowly dilating the urethra, the calculus, or other foreign body, will fall between the jaws of the instrument, and may be easily extracted. The passage of a large metallic bougie or catheter as far as the obstructing body, will, by dilating the urethra, favour its passage. A friend related to me a case of this kind. A gentleman, aged sixty-eight, who led an intemperate life, suffered from retention of urine for two days. Various remedies had been tried in vain, but on passing a catheter, a calculus was felt in the urethra. An instrument, as large as the canal would admit, was introduced, the calculus pushed a little towards the bladder, when the patient exclaimed he had the most urgent desire to make water. The catheter was withdrawn, the patient forced violently, and expelled a calculus the size of a large pea with great force against the bottom of the chamber utensil. He now passed nearly three pints of dark or rather black coloured urine. In some days afterwards retention of urine recurred, and his attendant neglected to use the catheter. The scrotum, perinæum, and hypogastric region were infiltrated with urine, sloughing took place, and the patient died. A larger calculus than the former was found firmly impacted in the membranous portion of the urethra. In this, as in all cases in which extraction of the calculus or foreign body cannot be accomplished by dilating the urethra after the method of the lithotritists, an incision should be made over it, so as to remove it and save the patient's life. This method is preferrable to the absurd one proposed by Chopart and Dubois, of succusion of the penis. Marjolin condemns this proceeding, and disproves the possibility of performing it by the laws of physics. Chopart relates a successful case in which a servant performed it; and Dubois another, in which a father employed it on his own child with the like result.

When a bougie or catheter broke in the urethra, Viguerie proposed to introduce a drill through a large canula and perforate it, and thus extract it. Another method was employed in such cases, or when a piece of wood or other foreign body was in the canal; and that was, to introduce a canula and pass its extremity over the substance in the urethra. Boyer had occasion to extract a pin, whose head was towards the bladder; he proceeded by seizing it by the middle, extracting it, though its point penetrated the parietes of the urethra. He succeeded, and no unfavourable symptom occurred. Professor Cooper extracted a pin in the same situation by another method. Its point was about two inches from the orifice of the glans; he passed the point through

* Surgical Essays, Part 2.
† Phil. Transact. 1821.

the lower surface of the urethra, turned its head towards the glans, and easily extracted it.* In cases of children, a probe will sometimes dislodge calcarious matter from the urethra.

The conoid form of the orifice of the bladder and neck of the urethra favours the escape and dislocation of small calculi in this part. Colot found as many as twenty-two calculi in this situation. If relief cannot be afforded by the preceding method, the perinæum should be incised as for the lateral operation of cystotomy, and if there be stone in the bladder, the incision may be enlarged for its extraction. In general, however, calculi or foreign bodies are situated in the membranous portion of the urethra; and in such cases the operation of incision is less difficult and dangerous than in the preceding case; because less parts are to be divided in exposing the object to be removed.

When the foreign substance is in the spongy part of the urethra, it can be readily fixed and removed by excision, should the forceps fail. If situated in that portion of the urethra which is covered by the scrotum, it would be advisable to push it either towards the orifice of the canal or perinæum, in order to avoid incising the loose cellular tissue of that part. But when this cannot be accomplished, the scrotum should be pressed against the foreign body and an incision made, and this ought to be sufficiently large to permit the free escape of urine, and thereby to prevent the infiltration of this fluid. In all cases in which the urethra has been incised, a gum elastic catheter should be worn in the bladder, the wound treated upon ordinary principles, and if possible healed by the first intention. When calculi are imbedded in the perinæum, an incision will be necessary.

When foreign bodies impact the female urethra, they are much more easily extracted, on account of the shortness and greater width of the canal than in the male. Such obstructions are of comparatively rare occurrence, but the annals of surgery contain some curious examples of foreign bodies in the female bladder. Silvy relates a curious case of a girl who allowed a small box, about the size of the middle finger, to escape through the urethra into the bladder. He passed the index finger into the bladder, and turned one extremity of it towards the neck of the organ. He desired the patient to make expulsatory efforts, which caused it to be expelled with much force, and projected it to the distance of three feet.* Fardeau described a case of impervious vagina, in which cirtion was performed through the urethra.† A case is related in which the surgeon dilated the urethra with a sponge, but passed the index finger into the bladder to extract a female catheter, and succeeded by introducing the other index into the rectum. Mr. Thomas, Sir A. Cooper, and others, recommend the waxed sponge; but for dilating the female urethra, Sir B. Brodie prefers a piece of wet sponge compressed between two boards in a vice; he considers Weiss's dilator better than either. The urethra may be dilated by different attempts in twenty-four hours.

Stricture of the female urethra is extremely rare. Sir B. Brodie describes but one case of it, which occurred at the orifice, and readily yielded to the use of bougies. He also states that Sir Charles Clarke has described to him a tumour or excrescence at the meatus, which impeded the flow of urine, and was removed by ligature. Sir B. Brodie prefers excision by means of the probe-pointed scissors, and when the bleeding ceases, the application of "this excellent and most useful caustic, the potassa fusa."

Mr. Macilwain relates a well marked case of stricture, about one inch from the meatus, which yielded in a few days to the use of bougies.‡

Excrescences and fungosities may occur near the orifice of the urethra. These are treated by escharoties or excision.

Case of Twins—Hydrocephalic Infant—Protracted Parturition—Death—Autopsy—Remarks. By James Patterson, M.D., Glasgow.

Sabbath, 19th June, 1836. At half-past ten o'clock, P.M., I was requested to attend Mrs. J. S., aged thirty, residing in Brock-street, Mile-end. On reaching the house I found her in a state of great exhaustion, having since the afternoon of Wednesday last been in labour of her fifth child, and, during the interval, she had lost a considerable quantity of blood. Her countenance expressed great anxiety; eyes, sunken and staring; skin, bedewed with a clammy perspiration, and she had totally lost the power of the lower extremities. Pulse 96, weak, but regular; tongue, clean; bowels had been freely

* Surgical Dictionary, 6th edit. 1830, art. Urine, Retention of.

* Dict Abrége des Sciences Med. Art. Uretre.
† Op. Cit.
‡ On Strictures of the Urethra, 2d ed. 1829.

evacuated on Friday with an ounce of castor oil.

Pains had continued moderate till about four o'clock on Thursday morning, when they became brisk, and a midwife was sent for. Soon after her arrival, they slackened much in severity, and she left her in the course of the forenoon. On Friday, at twelve, meridian, uterine pains became strong, and the midwife was brought at two. During the afternoon, hæmorrhage came on, and, in the evening, much against the patient's will, some medicine infused in warm toddy was administered, soon after which pains became very powerful; she said, "She felt in perfect agony, and they were not like natural pains." During their continuance, the midwife ruptured the membranes, and in an hour after, labour subsided entirely. Previous to taking the draught, she had felt an uneasy sensation in limbs, and after its operation, lost all power of moving them. The midwife remained during the night, but there being no effort of nature to accomplish delivery, she left her between five and six. "She on Saturday morning, declaring that, she could do no more for her, and they, the friends, might send for any one they liked."

In the forenoon a surgeon was procured, who made an examination, prescribed some mixture, which was soon given, but it produced no visible effect, and in a short time he left her without again returning. Matters continued much the same till Sabbath afternoon, when she became, restless, exhausted, and much depressed in spirits, having slept none since commencement of labour, and in the evening she expressed her mind that she felt she was dying. At the interference of the neighbours, the friends sent for me, when I found her as above stated.

On examination, per vaginam, I found the os uteri situated low in the pelvis and fully dilated, with a soft thick membranous bag protruding; by a careful scrutiny, I could detect one of the parietal bones presenting naturally, but by the fluid feeling of the bag, I was under the impression that the membranes had not been previously ruptured.

From her extreme debility and inclination to sleep, I deemed it improper to interfere till the following morning; for I dreaded that she would sink should any attempt be made to deliver at the time, and she had had no natural uterine efforts since the Friday evening. I ordered her a little hot wine and water with a sedative draught to be given as soon as possible; the limbs and spine to be well rubbed with equal parts of warm turpentine and oil, and afterwards to be kept quiet to induce sleep. After giving strict injunctions to send for me should any alarming symptom occur, I left her.

During the night, she enjoyed a comfortable sleep, and was greatly refreshed, and on Monday the 21st, at half-past ten, A.M., I was summoned in haste, as it was stated that "the child had come to the world;" but on arrival, I found that only the vertex of head protruded from the vagina, and she had not been conscious of any pains or natural efforts to produce expulsion. I brought down the child with caution, and found the head enormously enlarged, flabby, and evidently disorganised by hydrocephalus. Over the sixth, seventh, and eighth dorsal vertebræ was an irregular spot, two inches in diameter, covered with a glistening skin of a dark reddish or purple colour, apparently the consequence of that disease known to practitioners as spina bifida. The sole of the left foot was turned upwards and outwards. This child was born at eleven o'clock, and I removed the placenta in a few minutes.

On again making an examination, the second child was found presenting naturally; and as there was manifestly a torpid state of the uterus, I considered it proper to deliver without delay. Introducing the right hand cautiously, it was moved over and above the left side of the head, but finding it impossible to bring it down in the natural position, I carried the hand forward until I reached the feet, on which I laid hold, and without difficulty succeeded in turning and bringing down the child, twenty-five minutes to twelve, meridian. No hæmorrhage followed; a gentle pressure was applied over abdomen, the uterus contracted gradually and naturally, and I removed the second placenta in five minutes. Secundines were of the natural size and structure. The patient was in good spirits, stood the delivery well, and never manifested the slightest uneasiness or pain, but expressed her joy at the prospect of being soon better. Both of the children were females and had the appearance of having been dead upwards of forty-eight hours. The last born was remarkably stout made and every way natural.

After carefully applying a broad roller over abdomen, a little hot wine and water was given, as she became faintish, and quietness being strictly enjoined, I left her till five, P.M., when, in the presence of my

friends, Dr. Archibald Brown, and Dr. David Smith, the children were accurately weighed, and the measurements of the deformed head taken.

The two, with the cloth in which they were enveloped, weighed twenty pounds.

The morbid child weighed. .	10 lbs.
The perfect child	$8\frac{1}{4}$
The cloth	$1\frac{3}{4}$
	20 lbs.

Measurement of hydrocephalic head.—From root of nose, along sagittal suture, to occipital protuberance, $19\frac{3}{4}$ inches! From ear to ear, over vertex, $17\frac{1}{2}$ inches! Circumference along supercilliary ridge, $20\frac{3}{4}$ inches!!! And from the one zygomatic process of the temporal bone, to that of the other, in a straight line through the head, 4 inches.*

At this visit the patient had more power over her limbs, and *had voided urine freely without pain.* Pulse, 84. No complaint. Limbs and spine to be again rubbed in the evening with the embrocation as formerly.

21st. eleven o'clock, A.M.—During the night, vomited some dark coloured stuff resembling coffee grounds, and occasionally slept some. Feels very weak. Lochial discharge moderate. For the last fortnight has had a tickling cough, which at present causes an involuntary squirting of urine. No tenderness of abdomen on pressure. Pulse, 96, regular. Tongue rather white. No stool since Friday. Sinapism to the pit of stomach, and at night an ounce of castor oil.

22d. Eleven o'clock, A. M.—No vomiting since application of sinapism, and bowels freely moved with the oil. Complains of inability to retain her water; but the parts are so tender, as to render it impossible to make any satisfactory examination. Lochial discharge is scanty and extremely fœtid: motion of limbs improving.—℞. Tinc. Mur. Ferri. ʒij—Tinc. Canthar. ʒj. M.—twelve drops to be taken every two hours. To have barley gruel, with a little sherry wine.

23d. Ten o'clock, A.M.—Passed a restless night. There is a general fulness over abdomen, with slight pain on pressure, particularly in the hypogastric region. The labiæ are considerably swollen, and, with the left groin, and under part of left hip, along the perineum, are much excoriated with the urine. Suspecting some mischief about the bladder, I attempted to make an examination, but, from the pain which it excited, I was compelled to desist without obtaining any satisfaction. Discharge from vagina is now of a pale colour. Over the right trochanter major is an inflamed patch about the size of a crown piece and very painful; countenance, anxious; cheeks, slightly flushed; pulse, 112, moderate strength. Warm fomentations to abdomen; sores to be frequently bathed with equal parts of spirits and water.—℞. Submur. hydr. gr. xvj. Pulv. Opii. gr. vj. M. in pulv. iv. divide. One powder to be taken every three hours.

24th. Ten o'clock, A. M.—Enjoyed a good night; swelling and pain of abdomen gone. Feels very weak. Pulse, 96. Thirst, urgent; appetite, defective; tongue, pretty clean. To have one grain of quinine with fifteen drops aromatic sulphuric acid, three times a day, in a little water.

25th. Twelve, meridian.—Much as yesterday, but complains greatly of her back and sides, from lying. The spot over right trochanter has assumed a gangrenous appearance, with a tendency to slough, and left buttock has become tender. Urine still drains away; no stool since the 22d. To have an ounce of castor oil immediately.—℞. Sulph. Zinci. alumen. ā ʒijs.—tinct. Cinchon. ʒij. Aquæ. ʒxvj. M. Sores to be bathed with this every hour. Cont. alia.

27th. Ten o'clock, A. M.—Improving considerably; can move limbs pretty freely, and thinks she would be well, were it not for the incontinence of urine, and bed sores. Bowels regular; pulse, 80. Continue.

29th. One o'clock, P.M. Had a rigor last night which continued about an hour, and terminated in a profuse sweat that gave her some relief. This morning, had a considerable purging of a dark and very offensive matter, and is at present extremely weak. Sore upon right haunch appears much better, and the swelling of labia has nearly subsided; but she complains greatly of left haunch, upon which is a black spot, the size of a shilling, surrounded for an inch and a quarter with a fiery redness of the integuments. Pulse, 100; tongue rather white; no appetite. Four grains of calomel with two of opium to be given immediately, and to be repeated at bedtime. In the morning to have an ounce of castor oil. Port wine allowed freely, with beef tea twice a day.

* After much opposition on the part of the friends, Dr. Patterson succeeded in taking an accurate cast of the child in full, and any medical gentleman entertaining doubts of the correctness of the measurements, can have an opportunity of judging for himself by inspecting the cast, which he has retained in his own private collection of preparatioas.

30th. Ten o'clock, A.M.—Had a tolerable night, but urine dribbles as formerly; and, from the tenderness of the parts, cannot yet allow an examination to ascertain the state of the bladder. A membranous slough, apparently a disorganised part of the bladder, protruding from vagina, was cautiously removed. Castor oil operated well, and the alvine dejections are more natural. Continue the wine and beef tea.

July 2d. One o'clock, P. M.—Continues rather better, and sores are improving.

3d. Four o'clock, P.M.—Was sent for in haste, and Dr. Smith being accidentally with me at the time, we visited her together, when we were informed that, last night, she had had another severe rigor, and this morning had a violent attack of diarrhœa, which still troubles her, the stools and urine being now passed involuntarily. There is a hectic flush over the countenance, with hurried and laborious respiration, and she is to all appearance sinking. On introducing catheter, found the sphincter of bladder much relaxed, and, on examining the parts, could easily detect a large opening about an inch and a half behind the termination of the urethra. The vagina was filled with liquid fæces, from which it was obvious that there existed a communication between it and the rectum, as well as between it and the bladder. This state of matters satisfactorily accounted for the involuntary discharge of urine and fæces. On withdrawing catheter it presented a dark inky colour, evincing the acrid and irritating nature of the urine and discharge. We agreed to give the following—℞. Pulv. Ipecac. com. gr. x. Cretæ prepar. ℈j. Submur. Hydr. gr. iij. M. To be repeated in the evening should the purging continue. Wine, ad libitum. Pulse, 122. Tongue clean.

4th. Ten o'clock, A.M.—Diarrhœa abated with one powder. Passed a favourable night, but in other respects the same. Continue the nourishment.

5th. Ten o'clock, A.M.—Voice nearly inarticulate, eyes suffused, countenance pale and collapsed, breathing laborious. Had a profuse vaginal discharge this morning, and there is at present in the room, a strongly gangrenous smell. She is perfectly sensible, and makes no complaint. No treatment prescribed.

6th. One o'clock, P.M.—Speaks better, and says she feels no pain, but is sensible she is dying. She continued much in the same way till half-past five in the afternoon, when, without a struggle, she expired.

Sectio Cadaveris. Twenty-two hours and a-half after death—present, Drs. Brown and Smith. An incision from scrobiculus cordis to the pubes being made, the abdominal cavity was laid open, when the omentum and peritoneal coat of intestines were found in a natural and healthy state. The parietes of abdomen were dissected back, and the pelvic viscera brought into view. Inferior third of sigmoid flexure of colon was highly vascular for half of its calibre, and considerably distended with flatus. On cutting into it, a large quantity of tar-coloured blood was found, and the inflammation seemed chiefly to be confined to the mucous coat of the intestine. On removing the pelvic viscera, sad marks of disease made their appearance; so much so, that the pubal portion of the bladder, which was completely gangrenous, could not be separated from the symphysis pubes, nor could the rectum from the promontary of the sacrum. The walls between the bladder, rectum, and vagina, had for the most part been destroyed, and those portions that remained were blackened, softened, and easier torn than the finest paper. The uterus, externally, was of a pale white colour, and presented no appearance of disease. Between the entrance of fallopian tubes measured nearly four inches, from the os to fundus about six and a half, from the anterior to the posterior surface, at thickest part, two inches; thus being contracted to the size generally found about the end of a fortnight from delivery. When laid open, it was uniformly lined with a tenaceous dark-coloured substance, formed apparently by the remains of the deciduous vessels, mixed with lymph and coagulated blood. The fallopian tubes, round ligaments, and particularly the surface of the right ovarium, were slightly vascular, but were not affected by any material morbid change. On cutting into the right ovarium, we found the Graafian vesicles, from ten to twelve in number, beautifully developed, and healthy, being filled with a yellow albuminous serum.

The rectum was one continued mass of disease, and presented a large opening into the vagina, from which the fæces had escaped. Considerable portions of extravasated blood were observable over the inside of the symphysis pubis, and around the promontary of the sacrum. The pelvis was very capacious, and well formed. No other parts were examined.

Remarks on the Case.

This is a case replete with interest and instruction, and demonstrates to us the absolute necessity of ascertaining, at an early stage of the labour, the positive situation of the patient. In our opinion, but one cause can properly be assigned for this unfortunate woman's death; and, had there been a regularly educated person with her at the commencement of parturition, we have little hesitation in saying, that, if *he* understood his profession such melancholy consequences would in all probability have been averted. But here we have one intrusted to the care of an individual, calling herself a midwife, who had evidently no conception of the true state of the patient, and she clings to her till it is too late to render any efficient medical assistance. Had this poor woman's situation been ascertained on the Thursday morning, when the midwife was called in, it would easily have been perceived that all was not right; and soon after that period, the necessity of professional interference must have been obvious. But what was the interference in this instance? A medicine was given, we presume the secale cornutum, infused in toddy. And what was the consequence? The pains became excruciating, the pressure exerted on the sciatic, or lumbar and sacral nerves, from the vigorous action of the gravid uterus, brought on paralysis of the lower extremities, and finally inactivity, or rather exhaustion of the uterus itself! Now had manual interference been had recourse to, we have no doubt that one of the children would have been born alive, and that with perfect safety to the mother. We have much confidence to put in the judicious administration of the ergot, but it is an engine which ought not to be in the hands of the ignorant or unwary; for, to give it at the proper time, requires a perfect knowledge of the different stages of labour, and of the exact progress which the patient has made.

But how are we to account for the enormous devastation and organic lesion of the parts found on dissection, seeing that the labour never was severe, except during the action of the ergot? This can only be explained by the long pressure of the enlarged head upon the soft parts within the pelvis, which must have been for a period upwards of sixty hours, sufficient, in our opinion, to produce all the mischief which was found. But, it may be asked, if the children or the head were so enlarged as to produce such a pressure, the exciting cause of such effects, how could the delivery be accomplished without the severest suffering on the part of the mother? This is easily explained by the great relaxation of the parts; in short, there was a general lesion of the system, produced by the length of time in which the woman had been in labour, and, every one knows, that muscular power is overcome by long continued action, as is proved by the principle on which we attempt to reduce a dislocation. In the present instance, the relaxation of the parts was so great, that without the use of any instrument we had no difficulty in bringing down the first child, nor in turning and bringing down the second.

Every thing seemed more favourable than might rationally have been expected, with the exception of the urinary discharge, until gangrene and sloughing of the parts occurred; and, it may perhaps be objected to of our treatment, that, to combat these, we had not recourse to bleeding or blistering. But the actual state of the patient was every thing to contraindicate such treatment, and call for the use of nourishment and mild stimulants; for, all along, the pulse though high, was never strong or inflammatory, and the patient's chief complaint was that of debility.

With regard to the involantary discharge of urine, we were of opinion, that it arose from paralysis of the sphincter of the bladder, induced by the long continued pressure; but the tenderness of the soft parts prevented us from ascertaining the true source of the evil, and even though we had, from the extensive morbid affection, we do not believe that any efficacious treatment could possibly have been directed to it. The patient was decidedly of a most irritable constitution, the slightest excoriations soon assuming a tendency to gangrene, which, coupled with the singularity of the labour, the enormous enlargement of the head, and the length of the confinement, rendered all the circumstances of the case of the most hopeless and melancholy kind.

We are, on reviewing the whole, not aware if, after we first saw her, any treatment could possiby have saved her. The diagnostic signs then present were every thing but favourable, and our prognosis, grounded thereon, was of the most hopeless character. In short, our astonishment is, not that she died, but that she lived so long under such an accumulation of disease as was found within the pelvis on

inspection. If anything could have been done, we repeat, it was upon the Friday, when she ought to have been delivered. But why, it will be asked, did we not deliver when first called to the patient; why did we allow a prolongation of a labour which we conceived had already been but too protracted? The exhaustion and debility of the woman unquestionably forbade it; the proper period for interference had gone by, and there was no alternative left but wait till nature was a little recruited, or, in other words, till something like a reaction of the system was established. This practice we at least considered safe, and not at all inconsistent with the nature of her situation. The result justified the idea, and evinced the propriety of letting her alone till she was somewhat recovered from the exhaustion in which we found her. As we supposed, after enjoying a good night's rest, she felt much invigorated, and, however unconscious she might be of parturient pains, there can be no doubt that, after the rallying of the system, uterine action was again established, and the head of the first child was brought into the vagina by the natural efforts of the uterus to produce expulsion. We are unwilling to accede to the opinion, that a child may be born by the mere action of the laws of gravity! We trust, that the experience we have had in the obstetrical department of our profession, and the careful observations which we have made on the general principles of labour, enable us to form a tolerably correct opinion with regard to many of those singular peculiarities connected with gestation, parturition, and the puerperal state.

Before concluding, it is worthy of remark, that this interesting case of twins affords us another proof that spina bifida is generally combined with hydrocephalus. We believe that, in nine cases out of ten, where this disease exists, it will be found, on inspection, that there is an accumulation of water in the ventricles of the brain, and hence, we believe, the great mortality which accompanies this uncommon disease. We have been the more particular in detailing the circumstances of this case, that it may enforce the duty of ascertaining, as early as is consistent with modesty, the situation of a patient. This cannot be too strongly inculcated, for if anything such as malposition or malformation of the child be present, so as to render interference necessary, it ought, as far as practicable, to be rectified before the labour has advanced too far, or before it be too late to render the poor unfortunate sufferer any assistance.

The British Flora Medica, or History of Medicinal Plants of Great Britain. Illustrated with coloured plates. By Benjamin H. Barton, F.L.S. and Thomas Castle, M.D. F.L.S. Part I. —V. May — September. E. Cox, London.

This is a most interesting and instructive work to the general and medical reader. It is published on the following very moderate terms.

This work is intended to furnish a concise, but complete history of the medicinal plants indigenous to Great Britain, together with those that are well known and cultivated in gardens. The history of each plant will include its botanical character, synonymes in the different European languages, and medicinal properties; to which will be added a popular account of such species as are poisonous, and of those which are applied to useful purposes in the Arts and Domestic Economy.

It was at first proposed to describe the plants in non-technical language, but this would have led to an awkward compromise between the exactness of science on the one hand, and the vagueness of ordinary discourse on the other: moreover, by following such a plan, the descriptions would have been necessarily incomplete, as there are many parts of essential consequence to a correct botanical definition, which are quite unknown to popular language. Therefore, scientific terms have been retained; but a glossary will be given at the end of the work, for the use of the general reader: in the mean time, a coloured figure of each plant accompanies the text, which it is hoped will be sufficient for practical purposes.

The British Flora Medica, (the first three Parts of which have appeared under the title 'Flora Domestica,") will be continued regularly, in Monthly Parts, price 2*s.* 6*d.* each, until complete. Each Part will contain about forty pages of letterpress, and Twelve or Sixteen coloured figures.

A work of this kind was long wanted, and is very ably edited. It will be a valuable manual to medical students, and an instructive guide to the lovers of British Botany. There can be no doubt of its success. The plates are beautifully

executed, and not like the daubs of pirated works that might be mentioned.

Nouvelles Recherches sur le Rhumatisme Articulaire aigu en general, et specialement sur la loi de coincidence de la Pericardite et de l'Endocardite avec cette maladie, ainsi que sur l'efficacite de la formule des emissions sanguines coup sur coup dans son traitement. Par J. Bouillaud, Professeur, &c. Paris 1836.

New Researches on acute Articular Rheumatism in general, and more particularly on the law of coincidence of Pericarditis and Endo-carditis with this disease, as also on the efficacy of repeated blood-letting in its treatment. By J. Bouillaud, Professor.

We have to apologize to our readers for deferring our notice of this interesting work of M. Bouillaud to the present time. The author's character as an industrious and indefatigable pathologist is so well ascertained, that any work coming from his pen cannot fail to awaken the interest and excite the attention of every medical practitioner. His work on diseases of the heart has already attained a high place in medical reputation. If the principle be sound, that similarity of anatomical structure between any two parts, necessarily, or at least frequently leads to similarity of pathological affection in these parts, we certainly are warranted in anticipating *a priori*, that a work from M. Bouillaud on such a subject as rheumatism, will amply repay the perusal. Before we commence our analysis, however, we cannot help expressing our astonishment at our author's unqualified claim to originality with respect to the discovery of the frequent coincidence between cardiac and rheumatic inflammation. Is it to be supposed that so well informed a physician as M. Bouillaud evidently is, should be so little acquainted with the works of modern Brittish practitioners, as not to know that the frequent co-existence of these two affections is a point recognized and insisted on by every one of them? It may, perhaps, and we own, with some truth, be urged that this co-existence has been too often considered as purely *accidental*, whilst M. Bouillaud will have it that there is an *essential* connection between the two affections, or in other words, that the cardiac and rheumatic inflammations are part and parcel of one and the same disease, namely, of inflammation of febro-serous tissues in general. This view of the matter we certainly admit is original, and the merit of its originality we readily award to M. Bouillaud. It is a view, by the way, which it would be well for practitioners not to lose sight of in their treatment of rheumatism. We know of no more insidious disease than pericarditis, nor of any which when over-looked, or badly treated, leaves after it more intractable consequences. If our author's researches had no other effect than that of exciting the attention of medical men to this particular fact, it would in our opinion be sufficient to entitle them to great praise.

"The newest and most curious point of view of these researches is," says our author, "the coincidence of inflammation of the internal and external sero-fibrous tissue of the heart (*Rheumatic endo-carditis and pericarditis*) with acute articular rheumatism."

2. M. Bouillaud's attention to this coincidence was excited in a manner entirely accidental. When examining the sounds of the heart in some of his rheumatic patients he was surprised at hearing a distinct bruit de rape, de scie or de soufflet, such as he had often met in cases of chronic or organic induration of the valves of the heart, with narrowing of its orifices. In the majority of those patients, there happened to be no grounds whatever for suspecting any affection of this kind, as several of them were then for the first time attacked with articular rheumatism, and had up to the time of the attack enjoyed perfect health. In consequence of this, he states that he was determined carefully to stethoscopise the heart and its functions in every rheumatic patient he should meet. "Thanks," says he, "to this examination, I soon discovered that an acute affection of the heart, in cases of acute articular rheumatism *generalised*," (we use the author's own term) "attended with violent fever, was not a mere accident, a rare complication, or as one might say, fortuitous, but rather one of the most ordinary accompaniments of this disease." 3. There is something very like assumption here of the very question at issue—that assumption is contained in the term *generalised*—for if acute articular rheumatism *generalised* mean anything, in M. Bouillaud's use of the terms, it means that the heart itself was involved. We do not wish to be hypercritical. We do, however, earnestly desire that in discussing scientific subjects, whenever an old

term is used in a new and unusual signification, it should be accompanied with a definition. If such a principle were oftener adopted, the disputes which so often arise in philosophical disquisitions, and which so sadly mar the discovery of truth, would be very much narrowed. M. B. should have first have told us what he meant by the term *rheumatism*, and then what he meant by *rheumatism generalised*—if by the term *rheumatism* he meant inflammation of the fibro-serous membranes, the adjunct *generalised* is worse than unnecessary.

The coincidence of endocarditis with acute articular rheumatism is certain, when the following signs present themselves:

"Bruit de soufflet, de rape or de scie in the prœcordial region, which yields a dull sound over a greater extent than in the normal state, and presents also at times, but in a less degree than in pericarditis with effusion, an unusual fullness; the pulsations of the heart raise the precordial region considerably, and they are oftentimes irregular, unequal and intermittent, accompanied at times with a vibratory fremissement. The pulse hard, strong, vibrating, unequal, intermittent, like the pulsations of the heart."—p. 17.

Chap. 2 treats of the symptoms, progress, intensity, and termination of acute articular rheumatism. With respect to the symptoms as given by our author, we shall not say any thing, there being nothing calling for any remark from us: to the truth of the following observation however we fully assent:

"When acute rheumatism readily leaves one or more articulations, it generally does so only in order to attack others, whatever be the mechanism, which presides over the displacement. In general, cœteris paribus, the *fixity*, and resistance of acute articular rheumatism are in the inverse ratio of the number of articulations involved." "The mobility of acute articular rheumatism is a phenomenon, which has not received sufficient attention. We are not to suppose that acute articular rheumatism can be displaced, or more correctly speaking, disappear easily and rapidly in all its grades. Let there be, for example, very considerable tumefaction of the knee with copious effusion into the articulation, etc., and you will see whether it is by a *metastasis* or an abrupt and sudden repercussion, (delitescence) that the rheumatism will terminate.

"Two things widely differing from each other have been here confounded. True it is that even in the case now under consideration, the pain of the articulation may disappear promptly, with or without an explosion of a new pain in any other joint, but the same thing does not hold good with respect to the articular effusion, which then however constitutes the essential element of the disease. The pain is merely a kind of neuralgia symptomatic of the articular affection, just as the *stitch in the side* is with regard to pleurisy; and in both cases this symptom, common as it is, constitutes nevertheless an accident rather than an *essential* character of the disease, since the pleurisy may exist without pain, just as the articular rheumatism which is, as one might say, but a pleurisy of the synovial membranes. To say that an articular rheumatism, with effusion, may always be thus displaced in a moment, would be to suppose that pericarditis with effusion may likewise disappear in the same way, an hypothesis entirely at variance with sound observation." To the above reasoning we have no objection to make; it is perfectly intelligible; we must however be excused for finding fault with such licentiousness of diction as "pleurisy of the synovial membranes," M. B's. meaning is to be sure perfectly clear, and his mode of conveying it very forcible, but still in scientific discussion the right use of words is a thing always to be kept in view.

As to the duration of acute articular rheumatism, all observers are agreed, that it lasts very long, and that the average of its duration is from forty to fifty days. The treatment however, our author observes, must influence its duration. By his mode of treatment the duration of the disease has, he says, been diminished by more than one-half.

M. Bouillaud here alludes to a fact which well deserves the attention of medical men; that fact is, the continuance of fever in several rheumatic patients, after all affections of the joints had disappeared for a considerable time. This has, he says, in some measure prolonged the existence of the disease to an indefinite period. The cause of this rheumatic fever, which some pathologists were anxious *to essentialize*, our author considers himself very fortunate in having discovered. That cause he conceives to be rheumatic inflammation of the heart, vessels, pleura, etc. He further observes that these inflammations are almost always free from pain, the very circumstance which made them be overlooked; an additional proof that pain is not essential to inflammation.

In chap. 3 the anatomical characters and seat of acute articular rheumatism are considered. He assigns a very good reason, why the pathological anatomy of acute articular rheumatism is not the most advanced part of its history; that, he says, is, because this disease so seldom terminates fatally.

M. Bouillaud next adduces several authorities and some cases to demonstrate that acute articular rheumatism occasionally terminates in suppuration or purulent effusion.

With respect to the seat of this disease M. Bouillaud denies that it is in the ligaments, as has been taught by several pathologists; according to him the real seat of the disease is in the serous or synovial membranes of the articulations. The ligamentous tissues he conceives to be but accessorily involved.

In chap. 5 the nature of acute articular rheumatism is considered. That the disease is of an inflammatory nature he conceives is so clear that he says he feels ashamed of being obliged to adduce proofs in support of the opinion. To us on this side of the water it would be altogether uninteresting to have these proofs brought before us. No one here ever thought of denying the inflammatory nature of acute articular rheumatism, a disease which with respect to its local symptoms, is characterized by pain, redness, heat and swelling, and with respect to the constitutional symptoms, by violent fever; a disease also which when its termination is fatal, has been found to be accompanied with suppuration in the joints; a disease again which becomes developed under the same atmospheric conditions as other diseases of an acknowledged inflammatory nature, such as bronchitis, pleuritis, pneumonia, etc., a disease also which yields to the same mode of treatment as other inflammations, namely bloodletting, and in which the blood drawn exhibits the inflammatory buffy coat in the most decided manner. Against the inflammatory nature of this disease, its great mobility may be advanced as an objection. This objection M. B. answers by stating that the same objection may be urged against the inflammatory nature of several other diseases, as angina for instance, and catarrh, certain erysipelatous affectious etc, which, when not intense, may disappear in the course of twenty-four hours.

With respect to the displacement and sudden disappearance of articular rheumatism, there are certain particular conditions which must be taken into account; the principal of these are the following: 1st. The little severity of the disease, and its being spread over several joints from its onset, circumstances which are to a certain point correlative, for it seems that this disease loses in depth, what it gains in extent; 2dly. The influence of the external cause which produced the primary rheumatism, acting on a part hitherto intact, and in this case, it is not, as is usually said, the rheumatism of a diseased joint which attacks that which was healthy; but the latter being violently attacked, the other is more or less relieved, conformably to the grand law of Hippocrates: *duobus doloribus simul obortis non in eodem loco, vehementior obscurat alterum.* 3dly. The general rheumatic diathesis necessarily occasioned by general cold succeeding heat, accompanied with heat more or less profuse, though this cause may at first have occasioned an inflammatory fluxion only on some joints.—p. 101.

M. Bouillaud states that he uses the term "inflammatory fluxion" here designedly, in order to assimilate the shade or degree of rheumatism here in question with those fluxions of the face, which sometimes accompany tooth-ache or dental caries. "Will it be maintained, that the latter are not inflammatory, because they are observed to disappear very rapidly, as soon as the violent pain which produces the predominant symptom of this caries has disappeared? To reduce such a denial to its just value, it is enough to show that in cases where this fluxion is very severe, it is seen to terminate in real abscess. We should beware of taking differences in the severity of one and the same disease, for differences in its nature or essence."—*ib.*

M. Bouillaud next adduces the opinions of the two most eminent physicians of the 17th and 18th centuries with respect to the nature of rheumatism, namely, Sydenham and Stoll, and shows, that from the treatment adopted more particularly by the former, he must have been satisfied of the essentially inflammatory character of rheumatism.

Having accompanied our author thus far in considering the pathology of rheumatism, we shall come to the consideration of that which is or should be the ultimate end and aim of all our pathological investigations, namely, the treatment of this formidable disease. The real specific, according to our author, for rheumatism, its *quinquina*, is the antiphlogistic method, at the head of which stands blood-

letting; in order, however, that bloodletting may produce its good effects, due regard must be had to the quantity of blood taken, and also to the intervals between each bleeding. We shall subjoin M. Bouillaud's own *formula*, as he calls it, for bloodletting in this disease; it is the same as that which he recommends in the article *Pneumonia*, in the *Dictionnaire de Medicine et de Chirurgie Pratiques*, and in the article *Pericarditis*, in his work on diseases of the heart.

"*On the first evening* of the patient entering the hospital (provided he be of a sound constitution and strong), he is bled to the extent of sixteen ounces. If the patient be very plethoric, this first bleeding may be carried to twenty or twenty-four ounces; the common *dose*, however, is sixteen ounces.

"*Second day.* Two bleedings from the arm of from fourteen to sixteen ounces each, and in the interval between them, leaching or cupping (the latter is preferred) to the extent of twelve, sixteen, or twenty ounces. The cupping-glasses are applied round the joints principally affected, or to the præcordial region, if, as it happens in most cases, the heart itself is involved.

"*Third day.* One bleeding from the arm similar to that of the preceding day, and cupping either from the joints or region of the heart, to the extent of twelve or sixteen ounces.

"*Fourth day.* By this day the pain, fever, swelling, in general, all the inflammatory symptoms, have ceased; in which case no more blood is abstracted; in the contrary event, however, twelve or sixteen ounces of blood may be taken.

"*Fifth day.* In general, the disease is by this time progressing towards resolution; it may happen, however, that fever still continues; if so, venesection to the extent of 12 ounces, or cupping, as before recommended, may be resorted to.

"From the sixth, seventh, and eighth days, rapid convalescence takes place, and the patient may now begin to take food.

"Should a relapse occur (and the new formula does not give perfect immunity from such an occurrence, though it probably exposes the patient less to them than the old), it may be necessary again to have recourse to bleeding. Thus, in a case in which the disease had been *strangled* by four bleedings, a relapse took place, for which it was necessary to bleed the patient five times more.

"If the relapses be slight, they may be treated by emollients, strict diet, baths, opiates, &c.; and the disease may be allowed to continue for some days more.

"To escape relapses, the most important precaution to be taken on the part of the patient, is to avoid, with the utmost care, the slightest breath of cold.

"The *adjuvantia* of blood-letting employed in the manner now described, are, abstinence, emollient drinks, blisters, compression around the diseased joints, the application of compresses covered with mercurial cerate over these parts, to which the position and attitude most favourable for resolution should be given; emollient cataplasms; baths, opium in the ordinary dose, either internally or endermically."—Pp. 135, 136, 137.

Such is the plan of treatment recommended by our author, a plan which differs from that formerly practised by Sydenham, principally in the short intervals which elapse between each bleeding, and the frequent repetition of this operation, rather than in the quantity taken at a given time. We must say, however, that we should not feel ourselves warranted in adopting the practise of such profuse bleeding. We know that the blood is the natural stimulus of the heart, that when this stimulus is inordinately abstracted, the organ whose stimulus it was, is brought to a state in which it is most liable to be attacked by disease; when, therefore, the heart is brought to this state of debility during the existence of rheumatic inflammation, we cannot help thinking that the disposition to *metastesis* is favoured; and, are we going too far when we say, that the frequent coincidence observed by M. Bouillaud of rheumatic and cardiac inflammation, since his employment of his formula, has been the direct and natural result of his over-*dose* of blood-letting?

Hospital de la Pitié. By M. Lisfranc.

SCAPULO-HUMERAL luxation of four months standing successfully reduced. Apoplexia fulminans four hours after. Necropsy.

A man, forty years of age, of an athletic make, was recommended to M. Lisfranc's clinique by Dr. Laborie, to be treated for a scapulo-humeral luxation of the left side, of four month's standing. The following were the characters of the luxation, as ascertained by examination, in the presence of several pupils.

1. Depression of the shoulder.
2. Acromial prominence very marked.
3. Hollowness or sinking in the sub-

acromial space, which allowed us to ascertain that the glenoid cavity was empty, owing to the absence of the head of the humerus.

4. Existence of a bony tumour in the anterior of the chest, two inches below the external third of the clavicle.

5. Artificial rolling of this tumour, perceptible to the sight and touch, produced by rotating the elbow.

6. Elongation of the limb by two inches, measured from the acromial to the olecranon process.

7. Perceptible separation of the elbow from the corresponding side of the chest, and total impossibility to bring these two parts in contact.

8. Converging deviation of the longitudinal axis of the humerus with respect to the median line of the trunk. The axual line of the arm forms an acute angle with the upper part of the trunk.

9. Slight flexion of the fore-arm on the arm.

10. Lastly, raising of the limb, as well as several other voluntary motions of it, very incomplete.

These characters having been verified, first by M. Lisfranc himself, and then by several other medical men, all present were thoroughly satisfied that there was luxation of the humerus inwards and downwards. The patient was bled to the extent of sixteen ounces a moment before the reduction was commenced, and then conducted into the theatre.

After the fourth attempt at reduction the head of the humerus quitted its accidental position and entered into the glenoid cavity with a kind of crepitous noise, audible by every one around the patient. The shoulder instantly resumed its natural conformation, the head of the humerus was felt in its normal position, the limb itself resumed its natural length, direction, form, and most of its motions. More than three hundred pupils who were present, were satisfied of the accuracy of these details. The usual bandages were now applied; the elbow was fixed to the trunk; the ascending and descending bandage was applied so as to prevent the descent of the bone. The patient, though somewhat fatigued after the operation, complained of nothing; he appeared very well, and expressed his gratitude for the success of the operation. He felt himself so well that he did not even desire to be carried to bed; he walked into his ward with a firm step. Another venesection was ordered as soon as reaction should become manifest.

Before leaving the hospital, towards ten o'clock in the morning, M. M. Lisfranc, Forget, Laborie, Gaubert, Pinel Grandchamp, and Roquetta revisited the patient in his bed; he was then very well, in good spirits, and did not complain of any indisposition whatever; no reaction had as yet appeared, and he was only a little pale; the shoulder retained all it normal conformation. Two hours after, about half-past eleven, when every one had now gone away, the patient called the nurse of the ward, stating that he felt ill; he then uttered a loud cry, and died suddenly. Such an event, totally independent of the operation, called for the strictest investigation. More than forty pupils and medical practitioners were accordingly summoned, for the following day, at ten in the morning, to be present at the necropsy. The idea of aneurism within the pericardium, or of apoplexia fulminans, immediately presented itself to the mind of every one to account for this sudden death; the autopsy proved the correctness of the latter opinion.

Autopsy twenty-four hours after Death.

External habitude. The integuments of a violet colour; on a line with the temporal regions; over the entire extent of the posterior cervical region, and on the upper part of the head. The features retained their regularity. The cadaveric rigidity was very marked. The muscular system of the individual was very well developed; his make was very athletic. His stature was five feet one inch. The neck was short; its circumference at the thyroid cartilage was fourteen inches. The space included between the fourchette of the sternum and the meatus auditorius externus was seven inches. From the same point of the sternum to the symphysis of the chin, four inches. (The patient was lying on a horizontal plane.) The circumference of the cranium, measured by a line passing over the occipital protuberance, and below the frontal prominences was twenty inches. The two pupils were dilated to a line and a half; we observed an ecchymosis on the lower and external part of the right eye.

Head. When the integuments of the cranium were incised, a great quantity of black blood flowed from them. The cerebral membranes were considerably injected; the vessels of the pia mater excessively so; there was some serum effused into the tissue of this membrane.

The superior longitudinal sinus contained a considerable quantity of liquid blood without any coagulum. The brain was of the natural consistence. The grey substance was a little more coloured than natural; the white substance was as it were sanded, and from these sandy points black blood was seen to ooze. Over each section the orifices of the dilated vessels remained gaping, and poured out blood. The lateral ventricles contained a considerable quantity of lemon-coloured serum. The colour of the central grey substance was redder. All the sinuses of the dura mater were gorged with blood.

In the cerebrum the white substance was sanded, like that of the cerebrum; the grey substance was of a deep red, like wine lees.

Chest. There was no serum, nor any liquid effused into the cavity of the pleura; the lungs, which were free on all points of their surface, presented a violet grey tint, which was deeper on the left lung. The pulmonary tissue, when pressed, allowed a considerable quantity of a bloody liquid of a blackish colour, and containing some air, to ooze from it; it crepitated and floated, and presented no trace of tubercles. The mucous membrane of the bronchi was of rather a deep reddish colour; this redness extended as far as the fourth division. The pericardium contained no serum. The upper third of the posterior surface of the heart had contracted old adhesions with the pericardium. The ventricles contained a considerable quantity of liquid blood. When emptied, this organ was six inches from the apex to the base of the right auricle. Between the apex and origin of the aorta there were four inches and a half. The greatest circumference of the heart was eleven inches.

The parietes of the left ventricle were about six lines in their greatest thickness. The parietes of the right ventricle were three lines and a half. The inter-ventricular septum was six lines thick. The inner membrane of the heart was smooth and transparent, except in the left auricle, where it was whitish and opaque. The different orifices were free. The auriculo-ventricular, aortic, and pulmonary valves were normal. The auricles were of the normal thickness, as also their conformation. The aorta, at its origin, presented some indurations in its substance; and on its internal surface small whitish patches of cartilaginous consistence, situate beneath the internal membrane. The aorta, when opened, presented at its origin a circumference of about three inches and four lines. The pulmonary artery was but three inches.

Abdomen.—The stomach contained a small quantity of a yellowish liquid; it was generally of a greyish tint, and presented near the cardia a dark coloured bloody patch, three inches in diameter, and belonging exclusively to the mucous membrane. The state of the liver was natural; when pressed, a great quantity of dark blood oozed from it. The gall bladder contained a small quantity of bile. The kidneys were of a deep red colour, bordering on black, and when pressed, allowed a considerable quantity of black blood to escape from them.

State of the articulation luxated and reduced, and of the neigbouring parts.—There was an ecchymosis extending from the lower edge of the great pectoral muscle to the union of the upper and lower half of the neck, and passing below the clavicle; in breadth it extended from the sternal extremity of the clavicle to the infra-scapular and infra-spinous fossæ; in depth from the skin exclusively to the pleura.

The subclavian and axillary artery and veins were healthy.

1st. Aspect of the articulation after the dissection of the deltoid and great pectoral muscles. The head of the humerus was engaged under the acromis-coracoid arch. It was, however, a little more prominent than in the natural state. One would say that there was something between it and the glenoid cavity.

In this position, the head of the bone was surrounded with very thick fibrous tissues, which perfectly simulated the normal capsule.

This species of bursa encompassed the cephalic extremity of the bone on every side, with the exception of its great tuberosity, which appeared denuded, slightly eroded, and surrounded with bony vegetations to the extent of a three franc piece.

One would suppose at the moment, after this first inspection, that the head of the humerus had entered through this opening into the primary capsule by the means employed in its reduction. The continuation of the dissections showed that this envelope was but accidental.

2dly. Complete dissection and opening of the articulation.—This first fibrous pouch was opened conically, and the head of the bone was entirely exposed. Its capsule (calotte), rested on a layer of

fibrous tissue, which covered the glenoid cavity from the circumference towards the centre. The centre of the bursa in question presented an opening somewhat oblong, with thick and callous edges, capable of admitting the end of the index finger. With the finger and eye one discovers through this opening the cartilagenous surface of the glenoid cavity. It was evident to every one that this species of fibrous layer placed between the humeral capsule and the glenoid cavity, was nothing else but the old capsule of the joint which, being torn anteriorly and externally at the time of the luxation, was gradually drawn back on itself, and narrowed in the way that has been mentioned. This explains at once why after the reduction the head of the bone remained a little more prominent externally than natural, for these two articulating surfaces could not immediately touch, except at the centre.

3d. Position of the head of the humerus before reduction.—After attentive examination, it appears manifest that before the reduction the head of the bone was placed beneath and inside the base of the coracoid process. Accordingly, on this point of the scapula we perceive a small accidental facette, fit to receive one side of the humeral capsule (calotte). This capsule was consequently found at the distance of about one inch and a half from the internal edge of the glenoid cavity, and nearly two inches from the inferior edge of the clavicle. It was covered by the great pectoral muscle, and surmounted by the long head of the biceps. The accidental fibrous capsule now mentioned was doubled internally by a sort of serous lamina, and had been organised at the expense of the surrounding muscles, and principally of the sub-scapularis. (Here follow the names of the surgeons who assisted at the autopsy.)

Reflexions. —Three circumstances render this case worthy of being recorded in the annals of surgery :—

1st. The facility with which the reduction was effected by a moderate force skilfully directed, without any species of pully, and without either the muscles, arteries, or nerves of the luxated region and its environs having been in any way injured. No doubt this fact of successful reduction of the arm, after a four months luxation, is not single ; there are cases wherein reduction of the bone has been effected even after a longer lapse of time. But these cases are so few in number, that we cannot serve practical surgery better than by publishing every new case which presents itself.

2dly. The compression of the primary capsule, its interposition between the humeral calotte and the glenoid cavity, the great narrowing of the laceration, so far as to render the immediate re-entrance of the luxated bone into its glenoid cavity altogether impossible. This circumstance proves that Desault was right in saying that the opening of the scapulo-humeral capsule became narrowed in the course of time, so as no longer to admit the head of the bone. He also advised to move the limb forcibly before attempting its reduction, with the view of tearing and enlarging the aperture of the capsule, if possible.

3dly. The unexpected attack of apoplexia fulminans. This sudden death must have astonished those present at the reduction, so much the more so, as, on the one hand, the efforts of extension were very moderate, and because, on the other hand, the patient had been bled to sixteen ounces before the reduction was commenced. The extremely apoplectic constitution of the individual, and the size of his heart, which, as we have said, equalled the size of his fist, the dimensions of which were exceedingly great, may account for the congestion of the encephelon, and for the instantaneous death which followed it. It is proved by a number of authentic cases, that a momentary congestion of blood in the brain is sufficient to occasion sudden death. In six epileptic patients who died suddenly during the fit, M. Pinel Grandcham found no other lesion to account for death, but mere cerebral congestion. We may readily conceive, in fact, that the encephelon, suddenly distended beyond measure by a great efflux of blood, is in a manner strangled between the bony case and the impulse of blood, and so life becomes at once extinct.

A question here presents itself to our consideration ; could the rush of blood towards the head have been occasioned by the efforts at reduction? One must certainly be wholly ignorant of the history of injuries of the shoulder joint to answer in the affirmative. It is not well known that M. Larrey and Rokaska have each of them seen a luxation of the humerus, in which the head of the bone had pierced the chest, and lodged in the lung, where it remained for several years with impunity.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE VII.

Treatment of Strangulated Hernia continued.

Let us imagine the operation with the knife to be performed. I am not now going to enter into any special detail of this proceeding, inasmuch as none could be applicable to every variety of hernia. I confine myself to general observations applicable alike to every common form of the disease. I assume that the stages of the operation necessary to the exposure of the sac, are gone through with all the caution and skilfulness required on these occasions. Layer after layer of natural or altered structure have been divided, sufficient room has been prepared for all that is to follow, and the peritoneal envelope is satisfactorily recognised in the bleeding wound. A question often agitated, but, in my mind, not even yet decided, may now arise. It is this: shall we leave the sac untouched, unbind the stricture, and aim at a return of the contents? or shall we divide the sac, display whatever it contains, liberate the contents from their restraint, and endeavour to replace them in the cavity of the abdomen? You perceive, these questions involve the examination or non-examination of the intestines; and that the true solution is to be sought after by the aid of that light which pathology alone can bring to a subject of so much difficulty. At this source I endeavoured, in a preceding lecture, to instruct you; so that I shall now enjoy the comfort of referring you to facts so recently before your notice, that they must still hold a prominent place in your recollection. Repeating these questions, I even anticipate your answer. You are advocates for the division of the sac, and an examination of its contents. I agree with you; and I express this coincidence of opinion because I feel it will give you decision of action, and inspire you with becoming confidence in your first year of practice, a season in which you will be distracted by misgiving, and fear, and hesitation, in all your professional ways. Yet, this rule has ite exceptions; so that we are to be careful not to strain it beyond its proper limits. In hernia of small size, of short duration, in which a truss had never been worn, or, at least, worn without a suitable regard to its proper adjustment, and in which I have been permitted to act as promptly as I pleased, I have reduced the hernia without intermeddling with the sac. The result certainly encourages an imitation of the practice, when circumstances are similar to those I have detailed. I do not mean, that in all such cases I would do so without a circumspect examination of the parts which the knife exposes. But if these were free from congestion—if the sac was thin, moveable, and exempt from inflammatory vascularity—free from transverse bands, and without any thickening near the cervix, I would follow the course I have so far advocated, without any feeling of mistrust. In such cases things are in the same state in which they would have been had the taxis succeeded. The intestine is in its proper cavity, and the sac remains in its external situation. Remember, I am speaking of excitations; and I have now to observe, that, in my judgment, experience multiplies these to an amount which many, I am fully aware, will not be disposed to acknowledge. Where there is so striking a variance with

a general rule of practice, there must be some motive to justify the disagreement. Mine is the protection of the peritonæum and the prevention of all those consequences apprehended as likely to arise from an injury of that membrane. Pathology gives strength to my principle of action. Here are forty specimens of hernia, taken from all situations. Some collected in the dissecting room, others from those who died of the disease. They vary in size from the bulk of a marble to that of the largest double hydrocele. They afford proof of being of various durations—some wear the character of recency, others display changes in structure and appearance—evidences of their long continuance. As far as the sac is concerned, there is but one in which you see any thing that could justify its division. Concluding, from the testimony here offered, I am led to infer, that the condition thought to demand that division, is a much more rare occurrence than it is usually thought to be, and, consequently, I feel confirmed in the value of the rule I have applied to certain exceptions. But I have never seen any approach to narrowing in any part of a sac of new formation, so that, in such cases, I hold rather an obstinate opinion. When hernia, with narrow aperture, undergoes a sudden increase, I am less pertinacious; and yet, even there, I yield against the conviction of experience, and that experience affirms construction calling for division, to be a more rare occurrence than the language held upon the subject would lead us to believe. Notwithstanding all I have just said in reference to certain exceptions, you are not to forget I am favourable, in general, to the opening of sacs—my chief object is an examination of the parts contained. I have shown them to you in all their varieties of derangement and altered structure. You have them partially and wholly mortified, slightly glued together, or to the sac; and, in some examples, intimately bound together in the same relations. Firm and organised bands hold various situations. Here they connect the intestines with each other, and there they unite the contents in the peritonæal covering. I have exhibited to you a preparation in which the omentum performed an important part and more than one explanatory of those changes of which the mesentery is the subject. Now, it is for the purpose of examining these changes, and making such arrangements, and pursuing such other treatment as they suggest, that we desire internal inspection, and require the division of the sac. The history of hernia is almost always obscure: we can learn little of the date of its commencement. When we find it strangulated, it may be of sudden appearance; or having existed for some time, it may then be suddenly developed. A truss may have been used, improperly applied, or the parts may have been neglected from the beginning of the disease. All this invests the matter with difficulties which only a full exposure can remove. The favourers of the division of the sac make lightly of the injury of the peritonæum. I do not say they absolutely disregard it, but they esteem it of little importance compared with the advantages derivable from the practice. We are in the habit of thinking a wound of this membrane to be a serious mischief; and such we must acknowledge it to be, while we may be allowed to suspect that our fears may be in some measure exaggerated. For instance we dread no danger from the operation of tapping, although we inflict a wound unfavourable to union. In many cases this wound remains open, and fluid for days streams through without any other consequence than mere inconvenience. When our operations for hernia are timely performed, do we not succeed in by far the greater number of cases? and yet, sure, the peritonæum is not only extensively wounded, but is oftentimes handled with a blameable degree of roughness. I think such reflections are calculated to abate our fears, to encourage the division of the sac, and to weaken the arguments adduced in support of an opposite line of conduct.

Having thus far considered the arguments for and against the full exposure of the protruded parts, and having determined on the side of the usual plan of proceeding, we are next to perform one of the nicest and most important steps in the whole operation—the point to be selected for incision, the manner in which that incision is to be accomplished, and the extent to which it is to be carried, demand us to pause before we act, that we may give to each of these subjects that share of consideration which their great moment so justly deserves.

The point of election is often settled by the presence of fluid interposed between the intestine and the sac; it gives security to the former, and inspires the operator with a pleasing confidence. When the hernia is small, all parts in

which fluid is discoverable are equally suitable to our purposes; but as preference is commonly given to that most distant from its neck, because in their situation the greatest depth of fluid is usually found. When the secretion is absent, the choice may be fixed by the omentum, should it make part of the contents. This body is sometimes easily seen through the parietes of thin cyst; and even, when not thus recognizable, its situation may often be discovered by a careful employment of the touch; it affords the next best protection to the intestine, and may even be wounded with considerable impunity. When these guides fail us, and the smaller bowels stretch the sac to full tension, it signifies little in what part you make the aperture.

To hernia of mean magnitude these observations for the greater part apply; the only difference being, that I would give a preference to the line which separates the middle and inferior thirds in circumstances of equality in all other matters; and this, for reasons quickly to be explained. When herniæ exceed a a moderate size, the lower part of the sac is, if possible, to be avoided. The opening to be made is preparatory to a free dilatation, which measures, to be used afterwards, may require. Every line through which the knife passes, unless these be held in view, is to be regarded as an unnecessary violence. We need, even at the neck of the tumour, to facilitate our operations on the stricture, and in the centre of the tumour, that we may freely inspect the condition of the viscera which compose it. These ends may be conveniently determined without any interference with the lower portion of the sac. In large herniæ it is most material to preserve its entireness. The value of this injunction can be best estimated by those who have seen the consequences of officious meddling. In these cases, where the stricture is relieved, the intestines are allowed to remain in their external position, or they will rapidly return to it, although they have been replaced in the cavity of the abdomen. Every necessary exertion—every cough will give an impulse to the rupture; the consequences of which cannot be controlled by any means admitting of efficient and safe application. The peritonæal sac fully divided, the intestines constantly exceed their former limits; the resistance it afforded being destroyed, they yield to distending flatus, and acquire a volume frequently with difficulty confined within the precincts of the wound. It is but a few years since I saw a melancholy example of unnecessary freedom of incision. The hernia was umbilical. The disease was of long standing and of great growth, as sometimes happens when a tympanitic subject is opened, the bowels, unbound by the operation, started forward to such an extent as to cover the surface of the abdomen, and totally to conceal the wound. All efforts to return them were vain, for as fast as one part was reduced, another was sure to protrude. The patient was at length committed to his bed to await the arrival of a fate which imprudence made inevitable. The bowels, which may be said literally to have been laid by the side of the patient, were wrapped in fomentation cloths, and opium, the only refuge, was administered until the torpor of approaching death declared its further use to be unnecessary. This unfortunate event was the first means of drawing my attention to the necessity of preserving as much of the sac, in these cases, as might be esteemed compatible with other circumstances, which are to be steadily held in view. We thus counteract the effect of impulses which we cannot otherwise command, and we guard against results which we might otherwise have reason to deplore.

I have met with strangulated herniæ in which the protrusion was exceedingly small compared with the extent of the sac, which contained a large quantity of fluid. Here all points were almost equally eligible for perforation, or rather incision; for even at the very neck, the secretion was sufficiently abundant to defend the other contents from the dangers of the most bungling operation. In these cases trusses had been properly worn, but a cure was presumed to have taken place, and they were improvidently laid aside. The opening was narrow, the part which descended was small, the symptoms were acute, and the sac was irritated to the function of forming a large quantity of its usual fluid. Now, in such instances, I think an adherence to the rules I have delivered, is not a matter of any importance. You may open wherever you choose, and carry the incision to any extent, as far as my late cautions are concerned. The orifice of descent being contracted, and the protrusion small, you have no reason to calculate on the occurrence of events as formidable as I have described. These privileges of exemption, however, arise

only from our consideration of the subject. Taken in another point of view, indulgence in the liberty they seem to permit may be fraught with that danger to which an extensive violence to the peritonæum is likely to expose a patient.

The next point to be considered, is the manner in which the contemplated opening is to be made. On this subject you receive instructions from the highest modern sources. You are told to catch the sac between the fore finger and thumb in the manner I now show you, and you are desired to rub together the parts you then embrace, that it may be ascertained whether or not a portion of a viscus be interposed; and if it should be so, that you may endeavour to effect its disengagement. I applaud the prudence of the rule, but I cannot subscribe to its general application to the purpose of practice. If the sac exceeds the hernia, whether the former contains fluid to fullness, or to even an inferior degree of distension, I can, from experience, admit the adequacy of the rule to obtain the end for which it is contrived. But, gentlemen, I have often seen cases in which compliance with these instructions is impossible. The intestine, no larger than a marble, is co-extensive with the sac, and even when the protrusion amounts to several inches in extent, I have known it to be similarly circumstanced. When things square with the first condition, you may innocently follow the lesson of snipping out a portion of the sac held between the nails or in the forceps, and removed by a horizontal motion of the knife, in the manner which this imitative movement is intended to demonstrate. When, however, matters are widely and differently circumstanced, and the contents stretch the sac precisely to its utmost yielding, I say pinching is impracticable; and you must then rely, as I do, on a perpendicular application of the edge of the knife, on great steadiness of hand, and a sharp observation of the division of fibres, which a delicate pressure can from practice accomplish.

The third consideration, is the extent to which the dilatation of the sac should be carried. You have already seen, that in cases of small size you may divide its whole length; indeed, our doing so, is unavoidable, as we require all the space we can procure, for the purpose of facilitating the division of the stricture. You also understand the degree in which you are to spare the sac of large herniæ; so that on the present point I have only to add a few remarks relating to the division of the very cervix itself. I can see no disadvantages from its full and complete accomplishment. I do not think the chances of inflammation are increased; and, in my opinion, we can so thoroughly guard against the injury of vessels, that it is quite unnecessary to make the proposed provision for such an occurrence. Yet a weight of high authority is opposed to these opinions; but submission, which may appear to be commanded, must be withheld. Reading, reflection, anatomy, my own experience, and the rules which should regulate the use of our instruments, forbid me to acknowledge a superiority of precept, when that superiority does not appear to me to exist. I see no danger from the division of an additional inch of peritonæum, comparable with the convenience and necessity which it brings to both the operator and the patient. The best works on this disease are fruitful in alarm on the subject of wounded vessels. But where are we to search for the foundation of those fears?—I will not affirm that fatal accidents of this kind have not taken place; for this would be to deny the most creditable records of our profession. However, I must insist, calamities of this kind were so few, even in the days of great anatomical ignorance, that they furnish no apology for the apprehension which modern improvements seem anxious to excite. The real dangers are not to be concealed. But you must not be allowed to magnify them until they take such possession of your minds, as to mingle themselves with, and to preside over all your operative proceedings. If all these dangers are present, why were not those vessels, the injury of which now affright us, more frequently divided before anatomy reached its acme of minuteness, and before instruments had attained to their boasted excellence? In my memory there was a time when the arteries in relation with herniæ, and now the subject of detailed description, were not shown in demonstration, and the hernial aperture was mentioned without further comment; yet death from hæmorrhage was then as uncommon as it is at the present time. I am prepared for the objection that such events may have taken place, and that the actors in such cases may have remained ignorant of the occurrence. Plausibility here is increased by the apathy which prevailed as to post mortem examination.

I have seen numbers die after operation within the period to which I have

referred, and although necrotomy was not performed, I am strong in my conviction that the issue of such cases could not in a single instance be justly attributed to hæmorrhage. Hæmorrhage is suddenly or progressively fatal, and the phenomena which accompany both one and the other, have been long so well understood, that it cannot be fair to presume upon a mistake, and, therefore, I fully repeat the conclusion in which reflection on all that I have seen confirms me.

Should any sentiment I have expressed inspire you with a hazardous confidence, I shall deeply lament the failure of my intentions. It is right you should really know the real dangers which attend these operations, and each in its particular place shall be amply laid before you; but it is wrong to magnify these to an amount which promotes procrastination, and begets executive timidity. Should my meaning be obscure to any, I can remove it by an intelligible illustration. The greater number of you have been in the habit of performing venesection before you came to the metropolis to pursue your studies. After my lecture on phlebotomy, many expressed surprise that they had not been the authors of a great deal of mischief. But ignorance gave boldness to dexterity, and the first essays being successful, confidence presided over those which were to come, until you looked upon the operation as one almost exempt from danger, and you viewed its performance as a matter of much simplicity. However, now, when you are acquainted with what I may term the anatomy of venesection, and can, therefore, form an estimate of the serious accidents you escaped; more caution has been learned, boldness has been checked, and a business once gone about with complete unconcern, is now undertaken with reserve—no dread of wounded arteries, of pricked tendons, and of injured nerves, restrain that free, rapid, sufficient, and safe motion of the lancet, which reduced the irritation of pain, and may be said to have given an eloquence to this common operation. Magnified apprehension is the cause of the change which afflicts dexterity and success. But if danger be viewed through the proper medium of experience, the frightful phantom will appear of its natural size, and not one instance of dangerous unsuccess will stand where a thousand stood before. Two of the most successful and most practiced Lithotomists I ever knew were persons extremely ignorant of those parts of anatomy on which professors so largely insist at present. They knew that the rectum and pudic artery were parts which it was essential to avoid. They had a very imperfect idea of their exact relation to the traject in which their instruments were to pass. But they did know, if the incision had a proper direction, and was confined within proper limits, that these important parts must be certain to escape. Do not imagine I wish to weaken your regard for the present high grade of anatomical instruction. My object is far different. I desire to direct your attention in the course in which it should move, to secure the ends of surgical practice. Informed where vessels are, you can tell where danger lies, you can learn how to approach it without exposing yourselves to the risk which lies in wait for the ignorant and incautious.

An Abstract of Original Views on the Functions and Diseases of the Intestinal Canal, with an Examination of such Objections as have been urged against them; and a further Report of their successful practical Application. By James O'Beirne, M.D., Surgeon Extraordinary to the King, one of the Surgeons to the Richmond Surgical Hospital, Dublin.—(Read at the Medical Section of the British Association, Aug. 14, 1835.

(Continued from vol. ii. p. 82.)

From the direct and peculiar manner in which the rectum is connected with the cerebro-spinal system, I have shown that, whenever there exists any irritative state of that great governing nervous centre, this intestine is thrown into such strong contraction, that the expulsor muscles are no longer capable of overcoming it; and that, in proportion to the intensity or mildness of the irritation so conveyed, constipation, of either an obstinate or a mild description, is the inevitable consequence. In all these cases, it is as clear as the simplest proposition in nature, that, in order to overcome the constipation so produced, we have only to do that artificially, which the great expulsor muscles cannot do naturally,—namely, to dilate the whole of the contracted portion of the rectum, by introducing a flexible, yet sufficiently firm, gum-elastic tube high enough to enter the sigmoid flexure of the colon. And that this not only can be, but has been, accomplished with the

utmost safety, certainty, and expedition, and in numerous cases of colic, iliac passion, peritonitis, dysentry, tympanites, strangulated hernia, tetanus, and other diseases attended with the most obstinate constipation, I have proved from my own experience, and that of several eminent practitioners in this city and country, during nine years previous to the publication of my work.

Yet, this mode of treatment, so novel—so purely physiological—so extensive in its application—and so pre-eminently successful in practice, only disappoints the Medico-Chirurgical reviewer to such a degree, that he expects most of his readers to frequently ask themselves the question, "is this then the remedy for constipation of the bowels?" It is very simple, it is true, but that is only another example of the fact, that remedies become more simple, in proportion as our knowledge of disease becomes more correct. It is not true, however, that, as he must have imagined, it is too simple to be so effectual, for I have adduced a host of the most conclusive and unquestionable evidence to the contrary. Some years, also, have passed over, and his expectations remain unfulfilled, for I am not aware that any one has asked the question which he thought so natural. Be that as it may, he does not confine himself to this kind of warfare, but fires a regular volley of objections at all points of the treatment in question. The first of these objections is directed against the improved mode of administering an enema, and will be best understood, by being put thus: My description of this mode does not occupy more than three pages, and explains the length, size, and construction of the tube; the manner of introducing it; the resistance occasionally met with in its introduction; the way in which this resistance may be overcome; the occasional doubling of the tube on itself; the mode of ascertaining and preventing this doubling; the construction and working of the syringe; and various other practical points. Yet, the learned gentleman treats this description as "a long detail of operations," and as if it were wholly unnecessary. The context shows, also, that he considers those "operations" to be complicated and difficult. I can assure him, however, that, even with the apparatus which I have described, the operation, as he is pleased to dignify it, is extremely simple, and generally completed in less than two minutes. But it gives me great pleasure to be enabled to please him, and to obviate his dislike to double tubes, spring levers, and the turning of cocks; for I shall presently make him acquainted with a much more simple apparatus, and one equally well suited to the purpose.

In the mean time, I shall extract, and reply to, the rest of his objections. He says, "the operation, in every instance, must require one able surgeon, and an assistant! How is this practice ever to become general? How many patients labouring under constipation of the bowels (especially females, who are the most numerous) will submit to it? Not one in hundred year! It is clear that the remedy is only adapted to dangerous cases, where the common means fail, and where the life of the patient is in danger; or to a few obstinate cases in men, who may be inclined to submit to much trouble and inconvenience to get rid of an obstinate evil. Dr. O'B. informs us that he has now employed this mode of treatment for nine years, and with decided and unexampled success. This we doubt not; but still we think the practice can never become general, because it cannot be put in execution by the patient." He concludes his critique by expressing similar opinions, and adding the following remarks. "We confidently refer," he says, "to the cases introduced, and to Dr. O'Beirne's own description of the operation, for proof of the justness of these observations. Dr. O'B. ought not to be mortified if his favourite remedy be thus limited in the range of its application. We have little doubt that the author will be greatly offended with us for this 'discouragement' as he will call it; but should the author and ourselves live for ten years longer, we hereby invite him to publicly impugn our prognostications, should they turn out false."

Before proceeding further, I beg leave here to assure the learned gentleman that his review neither offended nor discouraged me; that, although I wished it to be different, both in matter and in spirit, its perusal convinced me, that it only opened a wider field for more firmly establishing all my views; and that it was this conviction which incited me to collect and arrange the materials necessary for that purpose. In this way, it has probably promoted science, and has certainly placed me under weighty obligations to its writer, for which I offer him my very unfeigned and grateful thanks; but I fear much that, from having appeared in so influential a journal, it has

not served the great cause of humanity. It is in this feeling, and under such circumstances, that I have ventured to abridge my reviewer's proposed term of probation, and to accept his invitation on his own terms, by "publicly impugning his prognostications," and pronouncing them to be "false."

We have now before us all his objections to the practice, as well as the precise extent to which he limits its application; and I have already shown, that neither my cases, nor my own description of the "operation," to which he refers, afford "proof of the justness of his observations." But I confidently expect that a few facts, which I shall now mention, will change all his unfavourable opinions on a mode of treatment, with which he could scarcely have had, at the time, much, if any, practical acquaintance. In the first place, it is not the fact, that "the operation requires one able surgeon and an assistant," for, in this city, medical pupils, apothecaries and their apprentices, and nurses, have long been accustomed to perform it, with the assistance of any person who could hold a basin, and often without any assistance whatever. Secondly, it is not the fact, that only one out of one hundred females will submit to it; or that males are more inclined to assent to it, for, after an experience of years, I can safely assert that women are much more manageable, in this respect, than men—that females in the middle and upper ranks in life readily submit to it, when performed by either their nurses or attendants, to whom a few simple instructions previously given, will be sufficient for the purpose—and that no female, be she of what rank she may, will, when suffering or in danger, long persist in refusing to be relieved or saved by its means. I have every reason to know, also, that such is the experience of others. Thirdly, it is not the fact, that "the remedy is only adapted to dangerous or obstinate cases,"—that "the practice can never become general," or that "it cannot be put in execution by the patient;" and I rest the assertion upon a fact which applies to all these points, namely, the fact that a self-injecting apparatus, constructed on the same principle, has been in rather general use in this country for the last eight or nine years, and perhaps in use to a greater extent in England and elsewhere, than I can well judge. But it is necessary that I should be more satisfactory on this point. About the year 1827, I requested the late Messrs. Reade and Sons, then eminent cutlers in this city, to construct a self-injecting apparatus, by adapting an eighteen-inch gum-elastic tube to the small syringe of Mr. Weiss's self-injecting apparatus. With considerable difficulty I prevailed upon some ladies and a few gentlemen to employ the apparatus so altered, as a means of removing habitual constipation, and their report of its very superior efficacy in this respect, induced me to persevere. By degrees, it became so generally known and valued, as to obtain considerable sale. From time to time, however, such complaints were made of the tubes supplied by Messrs. Reade, and which they procured from London, as convinced me that they were not sufficiently thick, firm, durable, or bulbous at the upper extremity. Accordingly, I wrote to Mr. Weiss, of London, and requested him to remedy these defects. This he did with his usual ingenuity, and in the most complete and satisfactory manner. From that time to the present, his agents here, Messrs. Fannin and Co., have sold a considerable number of small boxes containing the self-injecting apparatus so improved by him; and I understand that he even finds a sale for them in London. It is used in this way: The person having introduced the tube, inch by inch, until it has reached the necessary height, attaches it to the *side* of the syringe in the same manner as a bayonet is fixed, then puts the *lower end* of the syringe into a basin placed in front, and containing the fluid to be injected—and by merely elevating and depressing the piston, throws up the fluid, until the whole is injected. The fluid which I am in the habit of ordering to be injected, is very mild, easily procured, and consists of one pint of moderately warm water, two ounces of castor oil, and the same quantity of olive oil. The oils may be supended in the water by means of a sufficient quantity of mucilage or yolk of egg; but doing so will not increase the activity of either. Indeed, moderately warm water alone, will be very frequently found to answer the purpose fully as well as the above. Administered in this way, the injection usually operates either immediately, or in less than half an hour, and much more copiously and satisfactorily than one administered by any other apparatus. But its effects are not confined to thus completely relieving habitually constipated

persons at the moment; for I have often ascertained, that the natural free action of the bowels has been restored to such persons, by the repeated introduction of the tube, say every third day during five or six weeks; an effect obviously quite analogous to that produced by the introduction of bougies or catheters into the urethra, in cases where stricture of that tube causes inability to void urine. This is certainly a very valuable effect of the practice, but not, we see, more valuable than it is natural. In justice to my reviewer, however, I must admit that, upon some of the points immediately under discussion, he has been misled by a very unaccountable omission on my part, for my work, further than mentioning "my improved self-injecting apparatus" at p. 92, contains none of the foregoing facts. It was my intention to have noticed, in a particular manner, the most prominent of them, but I only discovered the omission when it was too late to attempt its correction.

There are some points respecting the use of the tube, which I have not mentioned, and which may be disposed of briefly thus. I tried the apparatus made by Messrs. Reade, as a substitute for the larger one which I have described, and found that its tube could not be depended upon at all times, especially in difficult cases. Subsequently, I tried Mr. Weiss's apparatus, as a substitute for the larger one, and found it fully as efficient for all medical purposes, while it is much more portable and easily worked; and, as such, I strongly recommend it to the profession. I employ the same tube in newborn infants that I use in the cases of adults. I prefer introducing the tube, without having the syringe attached to it, in order to give exit to flatus and fluid feces, and, by doing so, to enable the contents of the cœcum to be transferred to the sigmoid flexure. Considerable resistance is sometimes experienced in introducing the tube higher than four, five, or six inches. In such instances, I attach the syringe, put its lower end into the fluid to be injected, give two or three rapid strokes of the piston, and then urge the tube upwards. By adopting this mode of proceeding, the instrument will rarely fail to enter the sigmoid flexure. It is in obstinate and dangerous cases, however, that the greatest degree of resistance is encountered, and that chiefly at the upper annulus or entrance of the rectum. On such occasions, I adopt the same plan, with this difference, that while I press the tube firmly and steadily against the point of resistance, an assistant gives several strokes of the piston, and as rapidly as possible, so as to bring the full force of a strong and unbroken column of fluid to bear upon that point. By proceeding in this way for a few seconds, the resistance generally gives way suddenly, and the tube passes rapidly upwards, and as if through a narrow ring. I am aware that some are afraid to employ the degree of forcible pressure necessary on such occasions, and have failed in consequence of this fear. I have reason to know, also, that the fatal consequences of the unskilful management of rectum bougies, and the rude introduction of the metallic pipe of the common enema syringe, are, in a great measure, the cause of this dread. But the cases are quite different; and I shall now contrast them. The metallic pipe is some inches in length, and quite inflexible. The rectum bougie is short, thick, solid, and possesses but little flexibility. With either of these, it is obvious that great injury may be inflicted on the bowel. The gum-elastic instrument, on the contrary, is much longer than either, much more slender than the latter, tubular, flexible to the necessary degree; and, consequently, most unfitted for exerting any great or dangerous degree of force. Again, its action must be that of dilating, not piercing, the sides or walls of the contracted rectum, for it is grasped, throughout four-fifths of its course, by the muscular coats of the intestine, and compelled to move in the axis of the bowel, and in no other direction. All these points should be well weighed first, and then viewed in connexion with the well known fact, that it requires very great force to rupture living muscular fibre. But the argument which ought to have most weight, with those who fear to use the necessary degree of force, is that which I have used in my work, and which increased experience enables me to repeat, is the fact that I have neither met with, nor heard of a single instance, in which the introduction of the tube has been followed by any evil or unpleasant consequence. There is, however, one description of cases, in which it will be necessary to proceed with more caution. I mean cases of *organic* stricture of the rectum, particularly those of long standing. Yet, even this exception is deserving of but little consideration, for the particular species of stricture in question is

exceedingly rare, and far more so, as I shall presently show, than has been generally believed.

I now come to the concluding portion of my self-imposed task, namely, a further report of the practical application of my views. The materials at my disposal for this purpose are abundant, and fully bear out my former statements on this important part of the subject; yet they present such a degree of sameness, that I shall content myself with selections from them. In making these selections also, I shall direct attention, in a more particular manner, to dysentery, strangulated hernia, and tympanites, diseases of which I had, at the time that my work was published, but little experience of the new treatment, and but few cases to produce in support of its claims. Such cases as are necessary to be inserted, I shall gtve in an abridged form.

Colic.—Iliac Passion.—E. F., Esq., aged thirty, residing in the south of Ireland, after exposure to wet on a shooting excursion, and after having eaten some pears, was attacked, on the 25th of October, 1833. with pain in the abdomen, headache, heat of skin, and thirst. He continued to suffer great pain and anxiety for twenty-four hours, and had no discharge from his bowels during that time. In this state he was seen by a physician, who considered his case as one of enteritis, had blood taken freely from the arm, and ordered leeches to the abdomen, and active purgatives. November 3rd, no discharge from the bowels—no amendment—on the contrary, great pain in the umbilical, and right and left lumbar, and iliac regions. Another physician was now called in, and he took the same view of the case. From this period to the 15th of December following, bleeding to seventy or eighty ounces, about 160 leeches to the abdomen, numerous and active enemata administered in the common way, mercury to ptyalism, repeated blisters and opiate fomentations to the abdomen, were employed by these gentlemen, but only produced occasional scanty discharges from the bowels, and controlled the violence of the symptoms, which was sometimes very great. At length, after suffering in this way for nearly two months, a third physician was called in, who lost no time in introducing the tube of a stomach pump into the colon, and throwing up an enema. As soon as the tube had passed nearly to the height of a foot, the patient felt greatly relieved from pain, and in ten minutes after the enema was thrown up, he discharged a great quantity of feces, with instantaneous and decided relief. He had still, however, some uneasiness about the umbilicus, and he was ordered to have a belladonna plaster applied over the abdomen, to take three grains of the extract of hyoscyamus every sixth hour, and a purgative mixture from time to time. From this period his recovery was rapid, and he was perfectly well in a few days.—(Communicated by Mr. R. C. Chambers, a medical student, who witnessed the whole course of the case, and whose account of it I have ascertained to be correct).

William Smith, a lunatic, aged sixty, was observed, during a confinement for three months in the cells of the House of Industry, in this city, to be in the following state: His appetite was morbidly great, and his abdomen always in a state of distention. He generally vomited his food soon after taking it, often nearly unchanged; sometimes of a brown colour, and at other times streaked with blood. His bowels were always costive, requiring large and repeated doses of purgative mixture, which produced merely fluid evacuations. Ten days before death, the retching and vomiting became incessant, the bowels were, as usual, confined, and, at length, the matter evacuated from the stomach assumed a feculent odour and colour, which it continued to retain till death. Six days before his death, the bowels yielded to very large doses of purging mixture, but the evacuations were, for the most part, fluid. He had excessive thirst;—the only drink that rested on his stomach was the potus tartari.

The only post-mortem appearances observed were enormous distension of the cœcum and the whole of the colon, and remarkable contraction of the upper portion of the rectum.—(Communicated by Mr. Robert Smith, L. R. C. S. I., Curator of the Richmond Hospital Museum, &c. &c.).

Remarks.—No cases can possibly illustrate more strikingly the imperfection of the old, or the great superiority of the new, mode of treating colic or iliac passion, than the foregoing. There can scarcely be a doubt that the life of one of these patients would have been saved if the tube had been employed, or that the other would have escaped protracted and severe suffering, if the tube had been introduced in the first instance.

LECTURES ON OBSTETRICY,

AND

DISEASES OF WOMEN AND CHILDREN,

(Illustrated with numerous Plates.)

Delivered at the Medical School, Westminster Dispensary, Gerrard-street, Soho-square, Session 1836.

By. DR. RYAN.

LECTURE XXXIV.

Conjugal and Paternal Duties and Obligations.

We have now to describe the conjugal and paternal duties and obligations as regards the perpetuation and preservation of our species, and then to notice the various theories of human generation.

The first end of marriage is the procreation and proper education of children. The second end is a mutual society, a reciprocity of aid and comfort in all the affairs of life.

It is not lawful for married persons to wish not to have offspring, because that is contrary to the end of matrimony, and opposed to the command of Divine Providence. It is not lawful to use it immoderately, which is prejudicial to the health of both parties. The obligations of matrimony are, first, to preserve conjugal fidelity; secondly, to secure the physical, moral, and religious education of children.

Conjugal fidelity requires two things:—

First. That the debt should be paid by one spouse to the other; secondly, that it should be paid to this person alone.

Both are equally bound to fulfil this obligation when the debt is demanded, either expressly or tacitly (Corinth. vii. 3, 4.), unless a legitimate cause of denial intervenes. Refusals would lead to quarrels, hatred, dissentions, and incontinence, and perhaps greater crimes.

The legitimate causes of refusal are, when there is doubt of the validity of the marriage, or if asked during drunkenness or madness, or when the menstrual or lochial evacuation is present, or when there is any mortal disease which might be aggravated by it, or when one party labours under very severe illness or a contagious disease after marriage, as syphilis, gonorrhæa, leprosy, &c.; and lastly, when a woman is so deformed, that in the opinion of her medical adviser, her life will be endangered by parturition, or that the infant must be destroyed in her womb to save her from death. The danger in this last case is produced by natural or accidental deformity, which offers a physical impediment to parturition and the birth of a living infant. It is the opinion of moralists and physicians that such women ought not to marry or have children.

Again, if either party seeks it too frequently or immoderately, the obligation ceases. Neither is it lawful to demand it, when immorality would be induced by it, as in a public place, before children or domestics, or when frequent abortion is caused by it, which is highly destructive to health and life. Nec etiam idem peti vel reddi potest, eo modo qui sit contra naturam ut si mutetur naturalis feminæ usus ut loquitur Apostolus, vel impediatur prolis generatio.

It cannot be demanded or paid during menstruation or the puerperal discharge, and ought to be seldom required during pregnancy or lactation. The reason is, because the use of matrimony under these circumstances is opposed to the views of nature. The womb is performing certain functions during the first and second conditions, which altogether prevent generation; and in the third and fourth conditions the mother and infant may be seriously injured by it; and in the majority of instances, no conception can take place for some months of lactation. Under all these cirumstances, the great and sole end of marriage, the propagation of the species, cannot be effected, and animal gratification alone can be the only object. No physiologist can question these statements, and it is very remarkable that that the primitive fathers of the Christian church entertained these identical opinions.

St. Augustin says in his third Book against Julian, c. 21, "Conjugal modesty will not use menstruating or pregnant women."* St. Gregory, writes of puerperal or women recently delivered, "unless the time of purgation has first passed, they ought not to admit their husbands." † Mania has been caused by sexual intimacy during these conditions, and also a simple gonorrhœal discharge from the urethra of the male. The womb is congested during menstruation and after parturition; and is also performing a part of the function of generation during pregnancy and suckling. Some theologians maintain the contrary opinion, on the grounds that the husband might become incontinent, and that

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* Pudicitia conjugalis nec menstrualis, nec gravidiis utitur feminis.

† Nisi purgationis tempus prius transierit viris suis non debet admisceri.

he ought to have his rights; but such reasoners were ignorant of physiology.

It has also been urged that conception sometimes happens during lactation, and, therefore, that sexual commerce is allowable during this condition. This is only the exception to a general rule; because conception very seldom happens until lactation has ceased, or has been continued too long. The reason of this is clearly explained by physiology. It is this: in almost all instances, as soon as parturition is completed, there is a determination of blood from the womb to the breasts, which are appendages to the organs of generation, for the purpose of forming the secretion of milk, which is the natural aliment of the infant. This fluid is formed, and the function of lactation becomes a part of generation. Nature supplies it, until the infantine teeth are protruded, which is the signal for more solid aliment, the infant is now independent of the mother as regards food, the function of lactation ceases, the menstruation returns, conception speedily occurs, and a regeneration of the species is again accomplished.

It is also to be remembered, that the sympathy between the womb and breasts is very strong, and that irritation in the former will affect the latter, and, *vice versâ*. We see this proved by the fact, that repeated conjugal intimacy excites the uterus, determines blood to it, and also from the breasts, induces menstruation, diminishes and deteriorates lactation, and injures the infant. This statement is particularly exemplified towards the period of ablactation or weaning, when the milk gradually ceases.

It is also well known that when pregnancy occurs during lactation or suckling, the breasts in most instances become soft, flabby, and supply less milk, and this of a less elaborated description. If the infant is not weaned immediately it will become delicate, and require artificial food. The infant ought to be weaned if of a proper age, or a wet nurse procured for it, when circumstances permit.

Moralists have discussed the question, whether a hired wet nurse who suckled the infant of a stranger, was morally bound to pay the conjugal debt, and they decided in the affirmative. They likewise concluded that when such hired wet nurse becomes pregnant, or menstruates, she ought to restore the infant to its parents, so that it may be provided with another nurse if necessary. So also when mothers conceive, they are likewise bound to wean their infant, or commit it to the care of a hired nurse, or to dry nurse it. But it is urged that poor women cannot hire wet nurses, and ought to abstain from propagating the species. This is not correct, for if they become pregnant, they can employ artificial lactation or dry nurse their infants. I cannot, therefore, agree to the opinion, that this class of women may deny the conjugal debt altogether while suckling.

Those united in wedlock cannot lawfully abstain from rendering conjugal rites on account of poverty or a multiplicity of children. Adultery would be the common result. Lastly, it is contrary to nature to wish that offspring should not be conceived or born, although a spurious modern philosophy of our day inculcates the contrary, and has even suggested unnatural means for the limitation of offspring. Such precepts and checks to population, being contrary to the dictates of nature and reason, will never be practised by the great mass of mankind.

A husband or wife cannot morally consent to the infidelity of each other, nor can a parent consent to procure abortion by criminal or artificial means, because this is parricide, which has ever been considered the most inhuman species of murder. But it is not generally known that the fœtus is a living being from the moment of conception, and consequently its destruction is murder. Nature demands the obligation of rearing children, and even the natural instinct of the brute creation teaches and enforces it. Parents violate this obligation, when they neglect to do all things necessary for preserving the lives and securing the health of their infants. Thus, they are culpable when they do not remove all dangerous or hurtful things from within the reach of young infants and children; or when they do not supply them with a home, food, raiment, all necessaries, and with medical aid and medicines in diseases; and also when they do not educate them, or cause them to be educated, according to their own, or even a higher station in life, if their means permit it. Parents also neglect their duty when they refuse their offspring, at the adult age, their consent to marry, or a portion of their income; or when they do not allow them to adopt any trade or profession for which they have a strong inclination or a preference. For the same reason, mothers are morally bound to suckle their infants, unless when

labouring under disease or delicate health, or other conditions, which medical practitioners will explain to them. On a future occasion I shall show the importance of maternal lactation, and enumerate the causes which disqualify mothers for performing that natural and delightful duty. I shall only observe here, that every healthful woman is morally bound to suckle her infant; and nothing can excuse her for the non-performance of this duty. Nature never does any thing in vain; she has given breast milk for the nourishment of infants, and this alone is the best food for them at birth, and for many months afterwards. But when circumstances prevent mothers from performing the duty of lactation, they are bound to procure wet nurses, when their means permit; and these must be moral, not immodest, drunkards, &c., but possess many qualities, which will be described hereafter. When wet nurses cannot be procured, then artificial lactation, and dry nursing must be adopted; but these are far inferior to that aliment which nature intended for the human offspring.

There are various other cares and duties of parents towards the physical and moral education of their offspring, which will be described in the last section of these lectures. I shall now merely observe, that parents should be cautious in placing young infants in the same bed with themselves, for fear of suffocating them. They are also bound to acquire property, fame, honour, intellectual education, and religious instruction for their offspring. Parental authority and correction are necessary when persuasion and mildness have failed, but it is always to be recollected that children are much more influenced by suavity than by asperity of language, and that repeated blows will disgust them and destroy their mind. "Fathers, provoke not your children to anger, lest they be discouraged," Col. iii. 21. It is cruel to punish a child who does not know right from wrong, and has not the use of reason; and who ought to be treated with kindness and persuasion. "Spare the rod and spoil the child," is an adage opposed to physiology and reason. I have repeatedly observed children reared to the age of five years, who never were punished by corporal chastisement. The truth of this statement will appear hereafter, when we consider the development of the intellectual and moral states of infants. In my opinion, it is a most barbarous cruelty to strike a child at an age under seven years; that is to say, before it possesses reason; and I am pleased to think, that all well educated modern medical practitioners loudly condemn domestic and scholastic chastisement of children. Their dispositions and minds should be improved by moral means only, and this is the universal opinion of modern physiologists.

The obligations of parents towards each other and their offspring, are the strongest that bind society, and equally affect all ranks in life. Among these are mutual fidelity, love, and domestic happiness. Any infringement of these, leads to unhappiness and immorality. Jealousy is the usual result. I have repeatedly known ill-grounded suspicions and jealousy lead one or both parties into profligacy and ruin. When a husband or wife allows or takes the slightest liberties with an individual of the opposite sex, which amount to familiarities, abandons home, or is fond of public amusements and admiration; conjugal happiness will rapidly decline, and infamy, misery, and dishonour replace it. The unfortunate offspring will be neglected, and left to the slender cares of relations, or of a cold heartless world.

To remedy these evils, the softer sex ought to study and excel in those arts which show mind and personal appearance to the best advantage; which characterize the greatest majority of well-educated and sensible women, and secure the love and esteem of their erratic husbands. They should prove that marriage is a holy institution, based on religion, virtue, and morality; which command mutual love and fidelity. Those who enter this state must always remember the mandate of the apostle, "not to defraud each other," as infidelity is contrary to religion, morals, and justice. Love is secured by love, and confidence by confidence. Suspicions are invariably productive of evil. Levity and giddiness of conduct excite these, and too often lead to vice. Fidelity is in strict conformity to the marriage vow, "that, forsaking all others, the parties will respectively cleave to each other." Without this there can be no happiness; the marriage contract implies this duty, and *it is one equally obligatory on both sexes.* Where this is wanting, the bonds of marriage are immediately rent in twain; and religion and human law equally recognize the disruption of the contract itself; nor can it be supposed that any arrangements of the world, or any opinions which it may form

or promulgate on the subject, can be permitted to avail where the decisions of Christianity are so positive and so plain. "We maintain that the errors of the one sex, are as heinous in the sight of God as those of the other, but it is not so in that of man." (Marriage; the Source of Stability and Perfection of Social Happiness and Duty). The world in general forms a different opinion, and even Dr. Samuel Johnson has sanctioned it. He asserts "it is not natural for a man and woman to live together in the married state," (Life of Johnson, vol. iii. p. 71), and that "a husband's infidelity is nothing." Napoleon expressed similar sentiments on the discussion of the Code Civil. "Le marriage ne dérive point de la nature. La famille orientale diffère entièrement de la famille occidentale. L'homme est le ministre de la nature, et la société vient s'enter sur elle. Les lois sont faites pour les mœurs et les mœurs varient." It has also been urged, that "physically and morally, man is longer man, than woman is woman,"—"that marriage is contrary to the laws of nature,"—"that fidelity is impossible for man,"—"that infidelity characterised woman to the earliest trace of society,"—"that the law of love so strongly attaches two individuals, that no human law can separate them,"—in fine, "that the contracting parties are generally dissimilar in mind, thought, disposition, age, physical power, wealth, &c."—and "that divorce is an admirable palliative for the evils of marriage."

It is most remarkable that the opinions of Luther on this subject accord with the preceding. He proclaimed, that chastity, however it might be extolled by the Pope and monks, was impracticable; that all who pretended to it were hypocrites; that it was no virtue at all since it was directly opposed to the command of God, "go forth and multiply," and to the laws of nature. "It is no more possible," he observes, "to live without women, than it is to live without eating and drinking."

"When Eve was brought before Adam, he, full of the Holy Spirit, gave her the most beautiful and glorious of all names, he called her Eve; that is, 'the mother of all mankind.' Mark, he did not call her his wife, but the mother of all living men. This is the glory, the most precious ornament of women."

The author of the Reformation further contends, "that every man or woman who refused to marry acted in rebellion to the will of God." Nothing can exceed the contempt with which he speaks of female chastity, even admitting it to be possible; and the earnestness with which he urges both sexes to unite. He declared that all women who died during pregnancy, or in child-bed, if they professed the Christian faith, are saved, because they die in the very duty and function for which God created them. He also condemned the natural modesty and coyness of women, and held that such rebellion against the laws of God and rights of husbands should be punished. He repeated the advice, "if Sarah refuses, take Hagar." He regarded marriage as a civil contract, not depending on religion, but on the laws; and wherever the object of its institution was impeded, he would grant letters of divorce, and leave the parties to make new connexions. He went further, and declared, that as polygamy was practised under the Mosaic dispensation, it was lawful in modern times. "For my part," says he, "I confess that I cannot oppose the man who may wish to marry several wives; and that I do not think such plurality contrary to the Holy Scriptures." He advanced political reasons why such marriages should not be encouraged, although he allowed Philip, Landgrave of Hesse, a second wife.—(Memoirs of Luther, written by himself; translated and arranged by M. Michelet, 1836; reviewed in the Athenæum, June 18, 1836.)

Such also are the doctrines in polygamous nations; but we have already observed that they are open to unanswerable objections. They are, however, too generally acted on in all countries, for although polygamy is not allowed in most kingdoms, libertinage is common in all.

It is a physiological truth admitted even by the St. Augustine and other primitive fathers, that man might procreate according to the laws of nature with numerous women, while his wife was pregnant, in childbed, or suckling; but this would be contrary to morals and the welfare of society. Moreover, the power of reproduction remains longer with one sex than with the other, and "man is longer man than woman is woman."—(Physiologie du Marriage, par M. de Balzac, 1834.) Woman loses the power of fecundity with the cessation of the menstrual function at the age of forty-five or fifty, in temperate climates, while man retains it to the age of eighty, one hundred, or even one hundred and forty, as in the case of Thomas Parr, and others.

There is, however, one great error of universal prevalence among men, which

deserves exposure, and that is, the opinion that women after marriage, or after having had children, become relaxed, &c., and different from those who have not had children. It is well known, however, to physicians and physiologists that this is rarely the fact, and that even common prostitutes have been pronounced virgins, by many of the most experienced physicians and surgeons, examples of which conclusion I have given in my work on Medical Jurisprudence. The reason of this is obvious; it is because the vagina and uterus retain their power of contraction and dilatation during life, and regain their natural condition often in a few minutes after parturition, and invariably in a few days afterwards. I mention this fact, as the general opinion of the world is the contrary, and as it tends to gross and frequent immorality.

There are other causes of conjugal infidelity which may be mentioned. Most women, on account of the delicacy of constitution and greater liability to diseases than men, become delicate, and fall into a bad state of health, which is unfavourable to amorous impulse, and opposed to reproduction.

Men are more robust and vigorous, and retain their generative power to a much more advanced age, as already stated. It is also to be remembered, that the males of all mammiferous animals satisfy numerous females, examples of which are afforded by all the more perfect quadrupeds, as already mentioned—a power possessed by man to a still greater extent, as the most perfect of mammiferous animals. Nevertheless, he alone is morally bound to support and maintain his offspring, and not to desert them like the brute and irrational animal. He is influenced by reason and religion, while less perfect animals are deprived of both.

Percussion of the Anterior Part of the Thorax.

(Continued from p. 82.)

The exploration in a transverse direction of the infra-clavicular region, situated between the clavicle and sixth or or seventh rib, will again establish the clear sound of the lungs, but it will not detect its lateral limits, because the clear sound is prolonged outwards, below the axilla, and inwards, over the mediastinum; except, however, at the level of the part of the mediastinum comprised between the fourth and sixth ribs, where the dulness of sound is remarkable towards the sternum.

The transverse percussion of the part situated inferiorly between the sixth true rib and the right false ribs (right hypochondrium), will almost always give, in every direction, the dull sound of the liver; but this dulness will present different degrees, according to the height at which percussion is made, as was the case in the vertical percussion.

The dulness is equally prolonged outwards as far as the posterior surface, or the extension of the liver backwards.

The dulness of sound terminates internally on the right side of the median line and towards the superior part; the interior limit of dulness of the sound of the liver is found to be about an inch on this side of the median line, and the pulmonal succeeds the dull sound as far as the region of the heart; but towards the inferior part, the dulness of sound surpasses, by a small extent, the interior part of the cartilaginous border of the right false ribs, comprised between the salliant angle formed by these towards the ninth rib and the angle compressed at the xiphoid appendage, and situated a little nearer to the median line than superiorly.

By uniting the extreme points now described, we have the internal limit of the liver.

In rare cases, in which the heart is only separated from the liver by the diaphragm, the less remarkable dulness of the heart will only permit a well-experienced practitioner to distinguish the transition from one organ to the other; but a little lower, the tympanitic sound of the stomach, which succeeds the dull sound of the liver, will not admit any mistake in the determination of the lateral limit of this last mentioned organ.

When percussing the right side of the chest in a transverse direction, it will be necessary for the examiner, when he arrives at the superior border of the liver, to take the same precautions as in the vertical exploration, which were already stated. The percussion must be made with greater force to elicit the sound of the liver in this part, from under the lamina of the lung which covers it. Inferior to this, the slightest shock will afford the dull sound *(le son mat, matité)* and resistance to the finger. It is not so at the most inferior part of the liver, especially at the internal position, where it is only continued by a thin

lamina which covers the intestines and pyloric portion of the stomach, so that very slight percussion will verify its presence. A strong percussion would excite tympanitic vibrations in the subjacent organs, which would mask the dull sound of the liver which covers them.

Before passing from the right to the left side, the sternal portion of the chest should be explored.

On applying the plessimètre over the superior piece of the sternum, and percussing from above, downwards, we obtain, in the normal condition, the pulmonal sound as far as to within an inch and a half or two inches above the union of the ensiform cartilage with the sternum, where the presence of the right auricle of the heart will afford a slight dulness of sound without resistance. A little inferiorly this dulness disappears, and is succeeded by the tympanitic sound of the stomach.

M. Raciborski advises to mark the two points of transition with nitrate of silver, and then to examine the left side of the chest. This recommendation is not as yet acted on in this country.

The same method is to be followed in exploring the left as the right side of the chest. The percussion of the supra and infra-clavicular portions of the left side, from the summit of the lung as far as the fourth true rib, will give exactly the same results as in the corresponding parts of the right side. In all cases both regions ought to be examined, so as to institute a comparison between them.

When percussing the superior part of the chest transversely, from the right to the left half, the sound given by the sternal portion which seperates the two halves, does not materially differ from that given by the parietes which coincide with the lungs; but the sternal paries or wall which covers the mediastinum, does not correspond, superiorly, to any organ which can afford a dull sound, moreover, as the sternum acting as a large plessimètre, applied over the lungs as well as over the mediastinum, will necessarily communicate vibrations to both these parts.

Inferior to the fourth rib, the sonorousness of the two sides of the chest is no longer similar. This arises from the circumstance that the inferior part of the left side is not occupied by the same organs as the inferior part of the right side. The stomach is opposed inferiorly to the liver, and the space comprised between the fourth and sixth ribs corresponds to both lungs externally; but there is no organ on the right side which coincides with the heart on the left.

Thus, in placing the plessimètre about an inch to the left of the median line of the sternum, and advancing parallel to this line from above downwards, we perceive the commencement of the dull sound (cardial) towards the fourth rib. This dulness is more marked than that of the left ventricle, and is continued as far as the sixth rib.

In uniting the two points already noticed on the sternum with the two latter, we have the superior and inferior limits of the heart. The line which marks the superior limit of this organ, if prolonged outwards, would pass by the left nipple, or a little below it, and the inferior line would pass by the depression which exists at the union of the xiphoid cartilage with the sternum.

In the left hypochondrium, the dull sound of the heart is replaced by the tympanitic or stomacal sound, which is heard as far as the borders of the false ribs, when it is replaced by another variety of the tympanitic sound.

External to the heart, the pulmonic sound descends as far as the sixth and seventh ribs, and the stomacal sound succeeds it as far as the cartilaginous border of the false ribs. But on the outer side of the stomach the dull sound of the spleen is heard, more especially when this organ is extraordinarily developed.

The exploration in a transverse direction giving always the same results as that in the vertical one, is only more proper in determining the transverse diameter. It is therefore applied to limit the heart, the stomach, and the spleen, laterally, when the last organ is developed at the anterior surface of the stomach.

The spleen must be explored at the posterior part of the thorax, which is its normal position; and, moreover, as the stomach is too moveable, and its dimensions too variable to assign its precise boundaries.

The examination of the heart is to be made with a view of finding the transverse diameter, and internal and external limits of this organ. To ascertain this point, the plessimètre is to be placed in the infra-clavicular region, and it is to be gradually advanced more and more to the superior part of the heart. On arriving at this limit, there is a dull instead of a clear sound, commencing from two to three inches to the right of the sternum, and advancing successively to the left.

In the course of the first transverse lines superior to the liver, the clear sound of the lung is heard; but on the right border and on the median line of the sternum, a slightly dull sound is audible, which is caused by the presence of the right auricle; but this dull sound is not accompanied by any resistance. In some cases the dull sound will be manifest one inch to the right, or even more, but rarely at the distance of half an inch to the left of the sternum.

Departing from its internal region, the dull sound is more prolonged and more intense towards the left, and is succeeded by the pulmonal sound.

In the course of the transverse lines corresponding to the inferior part of the heart, we observe the dull sound of the liver on the right side, to which succeeds mediately or immediately, the sound of the right portion of the heart, according as the latter is situated upon the median line of the sternum, or to its right or its left, and also as the liver extends more or less to the left.

If the slightly dull sound of the right ventricle only mediately succeeds that of the liver, the part of the lungs or mediastinum which separates them affords a pulmonal sound. If on the contrary, the dull sound of the heart succeeds that of the liver immediately, these two organs being only separated by the diaphragm, it will be very difficult to distinguish the one from the other.

Having ascertained the superior points of the internal boundary of the heart, it is easy to determine its external boundaries; by drawing a vertical line from the former to those ascertained by percussion, in a similar way to that laid down to determine the limits of the liver. This investigation will not offer any difficulty, as the slightly dull sound of the right succeeds the more marked one of the left ventricle, and then the pulmonal sound. The surface of the heart thus determined by the dull sound, will offer a square of an inch and a half or two inches.

It is manifest that this extent does not exactly correspond to the size of the heart. This is easily explained by the fact, that in this region the left lung covers half the left ventricle. This part of the heart gives a clear sound on percussion, and it is the point of transition of the dull sound of the internal part of the ventricle, from the clear sound of the layer of lung which covers its external part, which is taken for the lateral limit of the heart. Nevertheless, by carrying on the percussion more externally, we perceive another sensible transition, between the sound in this latter part and that of the thoracic parietes, which do not correspond to the heart.

But the latter investigation is not made, because the extent of the surface of the heart which immediately corresponds to the parietes of the chest, is always in the direct ratio of its volume, which cannot be augmented except by the lungs being pushed outwards.

Percussion of the Thorax posteriorly.

The examination of the chest posteriorly, is of equal interest with that of this part anteriorly. The thickest part of the lungs corresponds to the vertebral fossæ, and on account of its dimensions is more frequently exposed to diseases. The vertebral column percussed throughout the whole of its course that corresponds to the thorax, will give a clear sound (pulmonal), resulting from its relation with the lungs as far as the second and third ribs.

After the exploration of this median line, we percuss the parts immediately situated on its right and left, and forming by their union a median zone, extending from the summit of the thorax to its base, and lying between the vertical lines passing along the vertebral margin of the scapulæ. In the whole extent we find, to the right as well as to the left, a clear sound (pulmonal) as far as the second and third false ribs, which correspond to a thin lamina of lung internally.

But although this zone immediately corresponds to the lungs in the whole extent of the thorax, the thickness of these organs at different heights, and sometimes the situation of subjacent organs abnormally developed, such as the heart, stomach, and liver, when the latter extends as far as the vertebral column, will have an influence over the sounds obtained. It is always easy to assign the nature as well as the situation of these modifications, and to refer them to the organ to which they belong.

Each of the two other zones which remain to be examined on the posterior part, possesses nearly the same transverse diameter as the median zone. These zones are limited externally by a vertical line passing through the posterior edge of the axilla; inferiorly, by the external parts of the base of the thorax; and superiorly, by the supra-spinal regions,

corresponds to the summit of the lungs posteriorly.

The supra-spinal region corresponding to the supra-spinal fossa of the scapula, will not give any remarkable sound, except in proportion as the depression of the shoulder will admit percussion to be made without, at the same time, the thickness of the scapula absorbing the sound.

We obtain in the normal condition a clear sound (pulmonal), but less marked than that of the anterior part of the chest, on account of the thickness of the muscles of this posterior part. Nevertheless, as Corvisart has already remarked in direct percussion, a little practice is sufficient to prevent this mistake. For the elasticity felt by the fingers in percussing, is sufficient to destroy the suspicion of a morbid condition, the existence of which might at first be presumed on account of the feebleness of the clear sound.

To percuss the infra-spinal region, the shoulder should be raised from the body by directing the arm upwards and outwards, or close to the ribs by its direction downwards and inwards. In the first position, the plessimètre will be applied to the ribs; and in the second, the shoulder will be so accurately applied against these, that it will transmit their vibrations without difficulty.

This region, limited inferiorly by the sixth or seventh ribs corresponding to the lower angle of the scapula, gives a clear sound (pulmonal), a little more evident than that of the infra-spinal region.

Lower down, the sonorousness is not similar in both sides; to the right, percussion elicits the dull sound of the liver in the whole of this region, except at the internal part, whose pulmonal sound superiorly is gradually lost in the dull sound of the liver inferiorly; the lung terminating by a layer, which becomes thinner and thinner a little external to the median zone. Percussion should be made with force superiorly and internally, in order to elicit the dull sound of the liver from under the thin layer of lung, which covers its superior and internal boundaries.

To the left, we obtain a very manifest pulmonal sound, which is afforded lower down than on the opposite side; it only ceases altogether inferiorly, where the presence of the spleen gives a dull sound, less distinct than that of the liver, to the extent of from three to four inches. In most cases the spleen is very small, and displaced inwards by the distended intestines and stomach, so that we find a tympanitic sound in the region which the spleen ought to occupy. The points of transition of the pulmonal sound to the dull sound of the spleen, and of the latter to the tympanitic sound of the stomach, will give us an exact idea of the superior and lateral limits of the spleen.

If the spleen is separated from the kidney inferiorly by a knuckle of intestine, the rapid transmission of the dull sound to the tympanitic sound, and of the transition of the resistance to the fingers to the elasticity, will enable us to determine its inferior limits; but when the spleen is contiguous to the kidney, we can only have some probabilities as to the termination of this organ.

Percussion of the Lateral Surfaces of the Thorax.

The right and left axillary regions, limited anteriorly and posteriorly, by the lateral boundaries of the anterior and posterior thoracic surfaces, superiorly by the axilla, inferiorly by the sixth and seventh ribs, afford on percussion a clear pulmonal sound. The inferior regions, terminated at the base of the thorax, give a similar sound in the region of the anterior surface to which they correspond. Thus the right inferior region offering superiorly the transition from the clear pulmonal sound to the dull jecoral or hepatic one, renders the latter sound in all the rest of its extent; and beyond the thorax, we find the clear tympanitic sound of the intestines. To the left, percussion elicits the pulmonal sound superiorly, and the stomacal sound when the stomach is distended with gas; and inferiorly, the sound of this last organ, and sometimes that of the spleen. Beyond the thorax, the tympanitic sound of the intestines is afforded as on the opposite side.

Such are the normal results which can be verified by percussion of the thorax; and let us now contrast them with the abnormal.

Abnormal condition.

The clear sound of the lungs elicited by percussion on the parietes of the thorax, depends upon the presence of the atmosphere in the pulmonary air vesicles. Whenever there is an obstacle to the entrance of air into the pulmonary vesicles, or that the air is accumulated in them in

greater quantity than is necessary for the function of respiration, there will be a morbid condition manifested on percussion. Several causes may prevent the air from entering the air vesicles: these are:—

1. An effusion of fluid between the pulmonary and costal pleura, compressing the parietes of the vesicles so as to destroy their cavity.

2. Pneumonia in the second or third stage (red or grey hepatization), in which the cavities of the vesicles are obliterated, as well by the engorgement of their parietes as by the concretions of sero-sanguinolent or purulent matter which they contain.

3. Intra-vesicular and intra-lobular tubercles. The first prevent the ingress of the air by filling the vesicular cavities; the latter by compressing the external parietes of the vesicles between which they are developed in the interlobular tissue.

4. The dilatation of the bronchi which compresses the parietes of the vesicles.

5. In fine, the different tumours developed in the thoracic cavity, which sometimes prevent by their thickness the communication of the parietal vibrations to the lungs, and can also oppose an obstacle to the entrance of the air into the vesicles, by compressing them in the same manner as the interlobular tubercles. Again, the obstacle may only diminish the quantity of the air which enters into the vesicles without completely preventing its ingress, as happens for example, by the matter secreted from the parietes of the bronchi in catarrh, and by the parietes of the vesicles in the first stage of pneumonia, in which there is only simple congestion without complete obstruction.

In all these morbid conditions, the parts corresponding to the site of the lesions enumerated, will give an anormal sound, which Avenbrugger has accurately compared to that afforded by the percussion of flesh. According to the preceding facts, the dulness of sound, and the resistance will vary according to the density of the layer of lung into which the air cannot penetrate, and according to the density of the foreign body which may occupy the place of air in the lungs.

In effusion, the dulness varies its position according to the displacement of the fluid, and is accompanied by a slight resistance presented to the fingers. In catarrh or pneumonia in the first stage, the immobile dulness of sound will be less pronounced, and there will be but slight resistance to the fingers; whilst in pneumonia in the second or third degrees, the dull sound more manifest, will be united to so marked a resistance, that sometimes, as M. Piorry has well observed, we experience a painful sensation on percussing the plessimètre applied over the hepatized portion of the lung.

When tubercles prevent the entrance of the air into the vesicles, the percussion of the part corresponding to their site will afford a dull sound, more or less marked according to their development; and the resistance to the fingers, proportional to the tubercular masses, will be considerable, and will induce in certain cases a sensation of hardness analagous to that of bone. As to the different tumours that may be developed in the thorax, they always afford the dull sound, and a greater or less resistance to the fingers according to their nature.

Corvisart has observed, that the costal pleura becomes sufficiently thick about the fourth day of its inflammation, to afford a dulness of sound.

Raciborski has even detected this sound so early as the third day of pleuritis, in the left side of the chest, with incontestible evidence of false membrane, and without any trace of effusion into the cavity of the pleura.

In all the diseases which I have now passed in review, the abnormal condition presents a defect or diminution of air in the air vesicles or passages, and is characterised by a dulness of sound and a resistance to the fingers more or less marked. But in the following disease, on the contrary, the morbid state resulting from too large a quantity of air in the respiratory organs will be shown by a clearer sound than in the normal condition.

This last phenomenon will be observed, first, in the dilatation of the pulmonary vesicles by air; secondly, in some cases of dilatation of the bronchi, in pneumothorax, and hydrothorax, with a small quantity of fluid, and a considerable quantity of gas.

In the two latter cases, the tympanitic sound is afforded by the gas enclosed in the cavity of the pleura, either caused by a secretion of gas in that membrane, or by the passage of air through a rupture of a cavern into that cavity.

In fine, when a large cavern, as yet unbroken, is filled with a considerable quantity of air, percussion will afford a very strong resounding sound; but in this case, the imperforation of the cavern on the pleural side, forcing the air to escape by the bronchial tubes during each

impulsion of the parietes, will so modify the tone of the sound, that it will perfectly resemble the noise of a cracked earthenware or metal pot, when struck with the finger —*(bruit pot fêlé.)* An accurate idea of this sound is afforded by placing the palms of both hands, as children do, so as to form an imperfect cavity, and then striking the back of one hand against the knees. The compressed air escaping through a small fissure, somewhat analogous to the calibre of a bronchus, will produce the same bruit or noise.

This sound should not be referred to the presence of fluid, as some authors have supposed, who have designated it bruit *humorique* or *hydropneumatique.* Its resemblance to the sound of metal when struck, has also caused it to be termed *tintement metallique,* or metallic tinkling, or ringing of metal. But these last terms are now very generally exploded by the French authors, who prefer the term bruit de pot fêlé (1836.)

To obtain the bruit de pot fêlé very manifest, the patient should breathe through the mouth to facilitate the issue of the air. If the mouth and nostrils were closed, this phenomenon would immediately disappear.

To conclude, all that may be said on the diagnosis on the normal state and diseases of the lungs by percussion, it is necessary to add, that the examination of the lungs, as double organs, ought to be comparatively made on both sides of the chest. The sonorousness of even the same lung during inspiration, and the retention of the air, and during expiration, ought to be equally the object of careful comparison. For example, if we find an obscure sound in a certain region which corresponds to the lung, it is necessary before we conclude on the morbid state that we should follow the advice of Avenbrugger, and desire the patient to inspire and retain the air, then to expire, and percuss the chest under each of these conditions. If the lung is indurated the air cannot enter the vesicles in sufficient quantity during inspiration, and the sound will be the same before and after the expulsion of the air, a similarity which does not exist in the healthful condition of the lungs.

It has been already stated, that the stomach in a normal or healthful state will give a tympanitic sound in the inferior part of the left half of the thorax, between the seventh and tenth ribs. But when the stomach is distended with a considerable quantity of gas, it may press the diaphragm and adjacent parts upwards, so as to afford a tympanitic sound as high as the fifth rib. This distention of the stomach, in nervous and delicate persons, impedes respiration and circulation, induces palpitations of the heart, inordinate impulse of this organ, more or less head ache, caused by determination of blood, or rather the prevention of the return of blood from the brain, and renders the respiration laborious or difficult in diseases of the lungs, and especially in consumption and the last stage of typhus.

The affections of the heart have also a marked influence upon the degree of dulness of sound and resistance of that region, and upon the extent over which these two characters present themselves. Thus sanguineous congestion of the heart, the presence of coagulated blood in its cavities, hypertrophy, particularly if accompanied by dilatation, effusion into the pericardium, &c., will be indicated by dulness and great resistance; and the heart pressing on the lungs, on account of the augmentation of its volume, will produce these signs over a more considerable extent.

The liver, as well as the spleen, may equally give a dull sound beyond their ordinary limits, when enlarged by disease. Sometimes it is the superior part of the liver which is hypertrophied or congested, and extends beyond its normal boundaries. Sometimes it is the left lobe that extends as far as the cul de sac of the stomach, or even to the spleen, and in all these cases the dulness of the sound of this organ is extended. If there are scirrhous masses in the substance of the liver it will give a marked resistance to the fingers.

The presence of hydatids will present on percussion a particular sound, similar to that which would be produced by a repeating watch, when its case is placed on the palm of the hand, and the glass percussed with the fingers of the other hand. The vibrations of the watch are owing to the oscillations of the bell in the machinery, and in a hydatid sac, the bruit depends upon the oscillations of the hydatids. M. Briançon, in a thesis maintained before the Faculty of Medicine, asserts that this hydatic bruit is in direct ratio to the number of hydatids, and in the inverse ratio of the liquid, the presence of which, however, is absolutely necessary to its existence.—(1828.)

The spleen, though more exempt from disease than the liver, is sometimes affected. One of its principal lesions is hypertrophy, whose limits will be deter-

mined by the dulness of sound in the splenic region, or those parts over which the enlargement of this organ may extend.

Such are the results of percussion on the supra and infra-diaphragmatic organs, from the summit to the base of the thorax. We have next to examine the results of percussion on the abdomen, in a normal and abnormal condition.

PERCUSSION OF THE ABDOMEN.

Normal condition.

We include in the percussion of the abdomen all the organs situated between the base of the osteological thorax and the superior circumference of the pelvis.

The anterior paries, or wall of the abdomen, is of greater extent than the posterior, is extremely elongated in the median line, where it corresponds superiorly to the hollow of the base of the thorax, and inferiorly to the plane of the pubis.

During the exploration of the abdominal organs, the patient should lie on his back, and relax the abdominal muscles, by bending the legs on the thighs, and the thighs on the pelvis or abdomen.

The ivory plessimètre is almost exclusively employed in the percussion of the abdominal organs. The finger is not sufficiently large, nor can it be so firmly applied to the mobile parietes of the abdomen as to depress them properly.

On percussing transversely the anterior part of the thorax, we have found the dull sound of the liver to the right side, and the tympanitic sound of the stomach to the left side. If we percuss the abdomen in the same direction, commencing from the limits of the osteological thorax, we shall find in the hollow at the base of the thorax, the tympanitic sound (stomacal) of the cardiac and pyloric regions of the stomach, though somewhat less clear than that of the external part of the same organ.

Inferior to this part, the transverse colon extending to the right and to the left, immediately below the liver and the stomach, gives the tympanitic sound (intestinal), but a little less clear than that of the stomach. All the organs situated inferior to this intestine, supra-umbilical, umbilical, and infra-umbilical, afford the tympanitic or intestinal sound in a greater or less degree.

Percussion of the abdomen in a vertical direction offers us equally striking results. Let us commence percussion at the right side, taking our point of departure from the first curvature of the colon, and descend along the ascending part of this intestine as far as the cœcum. In this course, the sound will be more or less clear; but the cœcum being almost exclusively filled with gas, yields a very loud tympanitic sound. The percussion is then to be made inwards, as far as the linea alba. In the whole of this extent we find the tympanitic sound proceeding from the intestines, and more particularly from the small intestines when filled with gas.

The median line of the abdomen or linea alba, corresponding in the hollow at the base of the thorax to the pyloric region of the stomach, equally yields the tympanitic sound in its whole course down to the pubis. We shall also find the tympanitic sound in the whole of the left half of the abdomen.

Abnormal Condition.

The abnormal sound is sometimes much more clear and louder than the normal, as when the stomach is distended with gas, and in tympanites; or the sound may be much duller when there are enlargements of the liver or spleen, or morbid tumours in the abdomen, and in the middle, but particularly in the last months of pregnancy.

In the healthful and normal condition, percusssion does not afford any indication of the presence of the bladder, the uterus, or the ovaries; and if there be a dull sound elicited in the regions corresponding to these organs, it is a sign of disease.

The percussion of the posterior parts of the trunk, corresponding to the abdomen, offers very little interest. It is extremely difficult to define the limits of the kidneys in a normal state, through the thick layer of muscles in their region; and their morbid alterations not generally affecting their volume, are not to be detected by percussion.

An important precaution to take in exploring the abdomen, is to apply the plessimètre, sometimes superficially, and at other times deeply, in order to examine the superficial and deep seated organs successively. If a tumour exists on one side of the abdomen, an assistant placed at the opposite side should draw the intestines towards him, in order to avoid the confusion of the sound of the tumour with the tympanitic one of the intestines.

The medical practitioner, once thoroughly impressed with these general sug-

gestions, will know how to avoid the difficulties which are encountered in percussion of the thoracic and abdominal organs A majority of the signs obtained by percussion will be unequivocal. But I must repeat, in conclusion, that this appreciation of the sensible qualities of organs cannot be too scrupulously nice, nor their mensuration too exact.

I shall now proceed to describe the application of auscultation and percussion to the diagnosis of diseases of lungs, heart, and abdominal viscera; and to prove satisfactorily that it is impossible to form an accurate opinion on the nature and treatment of a vast number of diseases of the chest, without a correct employment of these means. It will also appear that the most fatal results must arise from mistaking inflammations of the tissues, which form the respiratory and circulatory organs. As auscultation and percussion enable us to state with mathematical accuracy in large majority of pulmonary and cardial diseases, the exact morbid changes from their commencement to their termination, and consequently to prescribe appropriate and efficient remedies, while without their aid we should form erroneous and fatal conclusions.

TERATOLOGY.

Case of Abdominal Enadelphia, or monstrosity by inclusion, by M. Roux du Var; *followed by some reflections, by* M. Geoffrey St. Hilaire.

Case.—Madame Durand (Var) was 25 years of age when she became pregnant for the first time, and she was delivered in due time of a well-formed male child.

Eight years after she became pregnant again; towards the second month of this pregnancy a tumour was felt in the umbilical region, which was taken for a hernia, and for which she was advised to wear an appropriate bandage, which she constantly kept. She went her full time, and was delivered of a female child, which is still alive. Four years after she again became pregnant, and after four years more she again became pregnant, and was delivered of her child in due time. The two last children were males like the first; the latter died in the third year; the two others are still alive. Colic pains were sometimes felt in the region where the tumour was. This tumour had for some time assumed a globular form, and became more prominent when the stomach was full of food. Towards the end of March, 1836, Madame Durand, whose health had been in a declining state for some time, but which was then improving, was suddenly seized with a retention of urine, which resisted all the means adopted by Dr. Roux for its relief. From the commencement of it there came on some œdema in the extremities and face. On the sixth day after its invasion, the urinous odour and state of the pulse announced the alarming state of the patient. Symptoms of uterine congestion being developed, and she died, April 22d.

The post mortem examination took place about 24 hours after death. Dr. Vincenty and a veterinary surgeon, a brother-in-law of the deceased, attended the autopsy; and from them Dr. Roux received the following particulars:—

The adipose tissue of the abdominal parietes was very thick, and lubricated with a liquid of an ammonical odour. The peritoneum was healthy over the greatest part of its extent, only there were some adhesions towards the great lobe of the liver. The tumour, the presence of which had been recognised before any incision was made into the integuments, having been exposed, we perceived that it was occasioned by a cyst which occupied the space included between the great curvature of the stomach and the bladder; it was separated from the latter organ by another much smaller cyst. The great cyst was flattened from behind forwards, irregularly rounded, and presenting several knobs of greater or less size. Two broad folds of peritoneum where attached on either side to the small intestine, which it caused to deviate from its normal position, and by which it was surrounded. This mass, whose dimensions could not be taken with exactness, and the weight of which was from ten to twelve pounds, rested on the vertebral column, and compressed the aorta, vena cava inferior, and the ureters; it possessed but a very limited range of mobility.

The small cyst was nearly free; only a small fold of peritoneum attached it to the bladder; it had the form and size of a large pear.

The other person present at the autopsy, M. Oilivier, expresses himself thus on the same subject—"A tumour as large as a human head, unequally bumped (bosselée), was found in front of the pubis; it adhered to the mesentery by a broad and thin pedicle. Above the bladder and in the folds of the mesentery

there existed a second ovoid tumour as large as a common pear, and softened at the apex."

"The small cyst which was first opened," says M. Vincenty, "contained a steatomatous substance, having the consistence and colour of the pulp of a boiled apple; its external membrane was of a serous nature, and seemed to be formed at the expense of the peritoneum. The external one resembled softened mucous membrane.

"The great cyst had three membranes, one external serous; a middle one, which was fibrous; and an external or mucous membrane. An arterial and venous network was seen on its surface, proportioned to its size. The knobs were so many distinct cavities, separated by a membranous septum from the principal cavity; they were all opened successively. In one there was found an enormous tuft of long, fine, flaxen hair, of a rather tarnished appearance, united together by a tenacious fatty matter. The second cavity contained some steatomatous matter, like to that of the small cyst; the third and fourth also contained some, and also a substance resembling fixed oil.

"The principal cavity having been opened, there came out of it a great quantity of inodorous matter, of a creamy or purulent appearance; there also escaped from it a tuft of long hairs like the former, but less humerous, as also the fragments of five teeth. To the internal wall of the cyst a bone was closely attached, presenting two very distinct parts—the one flattened, thin, and semi-transparent; the other, irregularly pyramidal, having an aperture at its extremity. A first examination made us suspect it was a temporal bone. A tooth was attached to the part which resembled the squamous portion; the part compared to the petrous portion contained three, two of which were firmly fixed; the third was disengaged while we were detaching the bone from the point where it was fixed; it left behind it an alveolar cavity rather deep.

"Two other portions of bone of an irregular form adhered to another part of the envelope of the cyst, and were connected to a fibrous, yellow, and dense substance.

"The examination of the two cysts being now ended, we passed on to that of the genito-urinary organs; the suprarenal capsules were a little loose, the emulgent arteries were very large, and the renal veins were gorged with blood. The kidneys larger than natural, having been opened as far as the infundibulum, presented their cortical substance very much inflamed; the ureters were inflamed, and at least double their ordinary diameter, as far as the vertebral column where they were compressed by the tumour. They resumed their normal diameter in the cavity of the pelvis. Their inner membrane was very much inflamed, and contained a little blood. The bladder was entirely flattened and contained no urine; its mucous membrane was inflamed.

"The uterus was of the ordinary size; its inner membrane was considerably injected; the neck, which was in a scirrhous state to the depth of five or six lines, presented no ulceration. The ovaries were hypertrophied, and presented a degenerescence which appeared to be of a cancerous nature. The fallopian tubes were obliterated."

M. Roux conceives, from the consideration of all the circumstances, that the hypothesis of extrauterine pregnancy cannot be admitted in this case, and that it must, on the contrary, be regarded as a case of monstrosity by inclusion, and range it under the class of enadelphia. According to him, the place which the cyst occupied, when its presence became for the first time perceptible, by the external tumour which it caused, shows that the union of the two fœtusses took place through the umbilicus.

In our next we shall present some ingenious observations of M. Geoffrey St. Hilaire, on this interesting paper.—*Gazette Medicale de Paris.*

Observations on some of the more Important Diseases of Women. By James Blundell, M.D., late Lecturer on Obstetricy and Diseases of Women at Guy's Hospital. Edited by Thomas Castle, M.D. F.L.S. &c. 8vo. London, 1836: E. Cox, Borough.

It is scarcely necessary to observe to our readers that this is a most valuable and instructive work, by one of our highest authorities. It is much more comprehensive than any preceding treatise on the same subject in our language. It is, however, like all its predecessors, confined to *some* of the most important diseases of women. It is an excellent companion for the author's "Principles and Practice of Obstetricy," a production that has been already reprinted in America, and highly applauded in the different European nations.

Every page of the work under notice evinces the greatest experience and judgment. The notes appended by the editor enhance the text in no small degree. The style is clear, forcible, elegant, and graphic, and a perfect model for the imitation of medical authors.

In addition to these qualities, the matter is exceedingly well arranged in sections, a table of contents is prefixed, and an index appended. These are indispensable requisites in monographic and systematic works, as they greatly abridge the time of the reader. The work before us consists of fifty-three sections, and comprehends an account of the most formidable diseases of the internal and external genitals.

The first section is on retroversion of the uterus. This dangerous disease and its treatment are very minutely described. The following is the order in which the disease is delineated: Symptoms of retroversion, different kinds, connected with pregnancy, diagnosis, indications of treatment, examination and ordinary modes of reduction, treatment after reduction, occasional plans of reduction, cases in which reduction cannot be effected, tapping the bladder, section of the pubis, tapping the uterus, destruction of the ovum, retroversion during pregnancy, and after delivery, retroversion independent of pregnancy, and prognosis of retroversion.

Dr. Blundell commences his work in these words:—

"In making the following observations on the diseases of women, I shall not confine myself to any systematic arrangement, neither shall I extend my observations beyond the view of furnishing the reader with the most practical points. As, however, my instructions are especially directed to the inexperienced, I shall not omit such general remarks as are necessary to instruct and to advise, and shall, therefore, have to repeat some parts already entered into."

In accordance with this statement, Dr. Blundell selects a most formidable disease for his first section, which, from its great importance, we shall quote in full.

"Retroversion of the uterus.—The uterus, when healthy and unimpregnated, is placed at the brim of the pelvis, nearly in the centre of the cavity, the fundus lying forward above the symphysis pubis, the os uteri lying backward and below, in apposition with the middle of the sacrum, at the distance of about four inches from the os externum, the bladder being placed anteriorly, and the rectum behind. But when the uterus becomes retroverted, a total change of position ensues; the fundus falls down backward and below the promontory of the sacrum, and the mouth lies forward, and rises above the symphysis pubis; so that more or less compression, both of the rectum and bladder, is produced, the vagina being drawn upwards, and carried forward above the front of the pelvis."

This graphic description of the relative position of the pelvic organs deserves attentive consideration, and will explain the symptoms of the disease.

"Symptoms of retroversion.—When the uterus is retroverted, if the pelvis be small, or if the womb, not morbidly developed, chance, however, to be originally very bulky, or independently of any increase of its size beyond the virgin dimensions, it may give rise to a good deal of pressure upon the rectum, the bladder, and the parts adjacent, and, in this manner, it may distress much; more generally, however, where retroversion produces distressing symptoms, these will be found to be accompanied with an enlargement of the uterus, becoming, perhaps, as big as the head of a full grown fœtus; this enlargement of the uterus, resulting most frequently from pregnancy; occasionally, however, from scirrhosity, from polypus, or from a collection of hydatids. When, from any of these causes, the uterus is enlarged in its size, it may distress the patient greatly; the rectum may be so obstructed, that the fæces will scarcely pass along, and it may be necessary to have recourse to injections, in order to remove its contents; the bladder, too, and the urethra, may be so embarrassed, that there may be a difficulty in introducing the catheter; and accumulations of water may take place in the bladder in such quantity as to give rise to disruption, or at least to injure the structures of this organ; so much so, that acute inflammation, or fatal chronic diseases, may ensue. Nor must I forget to mention that the womb continuing to grow in the retroverted position, it must make pressure on all the parts which are lying among the bones of the pelvis, and, in so doing, must give rise to more or less irritation, of various nature, according to the functions and other properties of the parts compressed."

It must be manifest to every physiologist, that the displacement of the pelvic organs now described, must be, unless removed, extremely dangerous. The causes of retroversion are thus given by our author:—

"There are different causes, to which retroversion of the womb may be ascribed. Whatever enlarges the uterus within limits, so as not to make it too bulky to undergo the retrovertive movement, seems to dispose to the disease; and hence it is, about

the third or fourth month of pregnancy, when the womb becomes large as the head of a full-grown fœtus, that retroversion is most prone to take place, and the like effect is apt to be produced when, from scirrhus, polypus, mole, or a combination of these affections, equal bulk is acquired. Again, a cause which tends much to the retroversion of the uterus, and which, perhaps, is brought into operation in four cases out of five, is the accumulation of urine in the bladder. When the bladder becomes very much loaded with water, it makes a pressure on the uterus behind; and sometimes, when the pressure is great, it may, alone, produce the retroversion. In retroversion of the uterus, besides these two causes, there is yet a third which sometimes operates, and that is, the sudden action of the abdominal muscles. Women labouring under the retroversion of the uterus, will often tell you that they have had a fall, or that they stumbled, and made a strong effort to recover themselves; or, that by a violent fit of laughing, or coughing, the attack was occasioned. I should suppose it rarely happens, that the mere action of the abdominal muscles alone, unaided by the distended bladder, is the cause of retroversion of the uterus; but where there is an accumulation of urine in the bladder, so as to produce, by pressure, a disposition to retroversion, the sudden action of the muscles may complete the displacement. Lastly, retroversion of the uterus is sometimes to be ascribed, though not frequently, to an enlargement of the ovary. A dropsical ovary, or scirrhus, may give rise to retroversion; and, in these cases, just as the bladder overlays the uterus, so also may the ovary."*

The different kinds of retroversion are next enumerated.

"Retroversion divided into two kinds.—Some persons appear to have imagined that retroversio uteri occurs during pregnancy only; this is not the truth, for independent of gestation, a retroversion may be produced; and hence, as the history of the two cases is very different, it becomes convenient to divide the cases into two kinds; of those, I mean, in which you have gestation as the cause of the enlargement of the uterus, and of those, too, in which the retroversion of the uterus is wholly unconnected with pregnancy.

"Retroversio uteri connected with pregnancy.—When the uterus is retroverted, it not uncommonly happens, that the retention of the urine becomes complete, for the enlarged womb bearing on the neck of the bladder and on the urethra, a total closure ensues. In this case, the patient often tells her adviser that she has been placed in some situation of restraint; and that afterwards, on retiring and trying to evacuate the contents of the bladder, not a drop of the secretion would pass away; and this has occurred perhaps for hours, before you see her, the accumulation of urine having continued ever since; so that there is a great deal of pain of the abdomen, and heat, with forcing and fluctuation, which may be felt as distinctly as in a case of ascites; indeed, the efforts may be as great as those of parturition, and very much resemble them. I wish it to be understood, however, and very important it is that this should be known, that, in the retroversion of pregnancy, you have not always, nor I think generally, these complete retentions of urine;† for often where the uterus is re-

* "A lady, labouring under ovarian dropsy, was recommended to take a ride in an open carriage every day, for the improvement of her health, taking the air as much as might be without occasioning much fatigue. In one of these excursions, the vehicle chanced to be turned over, and she was thrown out with violence, her abdomen striking, with great force, against a stone that was lying by the road side. On her return home, a very copious secretion from the kidneys ensued, with great abdominal pain, when, in the course of a few days, she recovered, and found herself entirely liberated from the dropsy. Sometime afterwards she entered into the marriage state, and died with an irreducible retroversion of the uterus, about the fourth month. Inspection was made; when it appeared, clearly, that in consequence of the fall, there had been a rupture of the ovarian cyst, and a flow of water into the peritoneal sac, whence it was absorbed and effused by the kidneys, the remains of the cyst falling on the uterus, and carrying it down below the promontory of the sacrum, which, becoming retroverted, was fixed by inflammatory adhesion in the retroverted position. While this unhappy lady remained unmarried, she felt but little inconvenience, but marrying, and the enlargement of the uterus taking place, the womb, in consequence of adhesion, not admitting of replacement, a fatal pressure of the contiguous parts ensued.—(Dr. Blundell)."

Cases of this kind are by no means of rare occurrence, and unfortunately admit of little alleviation. It does not, however, invariably follow, that ovarian disease is aggravated by pregnancy, though this is often the result.

* "From the continuation of the distension produced by the accumulation of urine in the bladder, the tumour formed by it in the abdomen often equals in size, and very much resembles the uterus in the sixth or seventh months of pregnancy. Ed.

† In a case recorded by Van Doeveren, although the woman passed her urine every day, still she died from a ruptured bladder.

troverted, the retention is partial. A woman may be placed in some situation of restraint, on retiring she finds, that the secretion does not flow in a full stream, though a few ounces, may, perhaps, come away, not however without much pain and difficulty; from this time, a partial retention continues; day after day the fluid is sparingly emitted, but never in such a quantity as to empty the bladder completely, till by-and-by, perhaps, the secretion begins to steal away involuntarily, or she may have strong efforts to pass the urine even against her will, and with every effort a small gush only may be produced, or there may be a continual dripping, and yet, notwithstanding all this, an accumulation of water may go on very gradually, so that several pints, nay, several quarts,* may be gradually accumulated. At this time there may be œdema of the lower limbs, especially if your patient be in a state of gestation; and you, for the case is exceedingly deceptive, finding that the legs are œdematous, that the abdomen is large, as in the case of ascites, that it is fluctuating with distinctness, and that the patient, instead of having a retention of urine, on the contrary, supposes herself to labour under an incontinence of water, the retention of the secretion may be the last disease which you suspect, and you are inclined rather to ascribe all the symptoms to ascites, ovarian dropsy, dropsy of the ovum, or other causes. If you err, nothing is done, and the bladder may burst. Even when the bladder is emptied, chronic disease is to be expected, or there may be a fatal inflammation, or a miscarriage. In cases of this kind the urine may continue to accumulate for three or four weeks together."

It is scarcely possible to suppose that any practitioner could mistake the causes of this train of symptoms; but the records of medicine supply proofs of fatal ignorance on the diagnosis of this disease. Dr. Blundell gives the following diagnostic iudications which cannot be forgotten:—

"Diagnostic indications.—That retroversion of the womb exists, you may in general suspect, provided your patient tell you she is unable to pass her water in a full stream, and in large quantities at once, or that she cannot pass it at all, although a few weeks, a few days, or perhaps a few hours before, this function was performed well enough. You may moreover suspect the case, provided the patient complain of a great deal of pain about the hips, the thighs, the symphysis pubis, the sacrum, joined with, occasionally, bearings down; and provided also, the rectum appears to be obstructed, so that the contents are not expelled at all, or when expelled, flattened, for this is said to be a symptom of the disease. These symptoms should, in particular, excite suspicion, if the woman have been placed in a situation of restraint, and if she be in the third or fourth month of her pregnancy.

"Discovered by examination only.—Although the above circumstance may be received as probable proofs, it is by examination, and by examination only, that retroversion can be distinctly ascertained. Investigating the case, the abdomen you will always find of a large or swollen size, and fluctuating very distinctly, especially where the retention has been of several days standing, and where an accumulation of water in the bladder has been gradually proceeding during the whole time; further, on examining internally, you will find a large swelling, a tumour filling the pelvis; the vagina lying before it, the rectum behind it; the os uteri in the general not to be felt, or not to be felt without a good deal of difficulty, when it lodges in front of the pelvis above the pubes. By an examination per anum, the same tumour may be felt, pressing the rectum to the hollow of the sacrum; and if both these examinations be made at the same time, you may readily find that the tumour is confined between the vagina and rectum. Again, on emptying the bladder, you further know the disease by ascertaining that the womb is not in its healthy situation, above the symphysis, the observation being made with facility, on account of the relaxation of the coverings; and by your observing, moreover, when the tumour is pushed from the pelvis, that it may be felt in its ordinary place. Some have gone so far as to assert, that the retroversion of the womb may always be known by the situation of the os uteri, telling us, that if the uterus is not retroverted, the os uteri will always be found lying forward and upward, above the brim in front; but this is a mistake. The occurrence, notwithstanding, is sufficiently frequent to render the diagnostic worth your attention; remember, however, it is far from being the sole or principal one by which you are to judge, and for two reasons,—first, because, when the neck of the uterus is very flexible, as sometimes you

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In Mr. Croft's case, a small qnantity of water occasionally passed involuntarily.—(London Med. Journ. vol. II. p. 381. Dr. Jewel.)

* A woman labouring under symptoms like ascites, a practitioner proposed, I think, the operation of tapping; there was, however, some obscurity about the case—a great deal of pain more especially; and obstetrician being called in consequence, a catheter was introduced, and water was drawn to the amount of seven quarts, which had been accumulating in the bladder for two or three weeks, in consequence of a retroversion of the uterus.—(Dr. Blundell.)

may have a retroversion of the body only, the uterus doubling backwards upon its own cervix, and the os uteri remaining nearly in its former situation? or, secondly, which is a great defect in the diagnostic, where you have an enlargement of the ovary, this viscus will sometimes fall down and tilt the uterus, so as to place it with the fundus upon the promontory, and the mouth upon the symphysis, insomuch, that the mouth of the womb will stand much in the situation in which it would he placed, provided the retroversion were of the ordinary kind. It therefore follows, here, as in many other instances, it is by a combination of all the symptoms, and not by any single indication only, that your opinion must be guided. When you find the abdomen fluctuating, the pelvis filled with a tumour, with the vagina before it, and the rectum behind, and when emptying the bladder, and raising the swelling, you find it takes the situation of the uterus, then, and not till then, can you determine with certainty, the nature of the complaint."

We now arrive at the indications of treatment, and the various plans that have been adopted. These are minutely described as follows:—

"Treatment of retroversion.—Before you attempt to put the womb in its proper place, remember that it should be your first object to evacuate the bladder thoroughly, and for these reasons,—first, because, if the bladder is full, and lying over the cavity of the pelvis, it will obstruct the pelvis so much as to render the reduction of the uterus, if not impossible, very difficult, for want of room alone; and, secondly, because even if you were to overpower the resistance, and replace the uterus, by forcing the womb into the abdomen, you might tear the bladder, and, in that way, destroy your patient. Dr. Cheston was once called to a case of retroversion, where large accumulations of urine had taken place, and where the catheter could not be introduced; anxious, of course, to avoid the need of tapping the bladder, (a very grave operation), he and others attempted to reduce the retroversion without previous evacuation; but, fortunately, they did not succeed; I say fortunately, because if they succeeded in urging the tumour above the brim of the pelvis, disruption of the bladder would most probably have been the consequence. Failing in this, of course they were obliged to have recourse to their surgery, and the bladder was tapped. Now it is remarkable that in this case, after the urine was withdrawn by means of the trocar and canula, the uterus itself returned into its proper situation: and though Cheston, who was a very able man, and others in company with him, could not succeed in replacing the uterus by manual effort, yet it returned itself after the bladder was emptied. Do not forget then, that the bladder should first be thoroughly evacuated by means of the catheter, for it will rarely happen that any tapping can be required, if the catheter be committed to proper and dexterous hands.*

"Ordinary plans of reduction.—After the bladder has been emptied, you are then to place your patient in the usual obstetric position, on her left side, close to the edge of the bed, with the shoulders forwards, the loins posteriorly, and the abdomen facing a little towards the bed; this done, you pass your fingers, say all the fingers of the right hand, into the vagina, so as to lay them upon the body of the uterus, and at this time, if the patient can bear it, which often is the case, you place the thumb in the rectum, and thus get the uterus between the fingers, after which, with gentle pressure, frequently, I believe, without the least difficulty, you may raise the womb above the brim of the pelvis. This may be more easily done, if you have drawn off eight or ten pints of urine, or even two or three, because the abdominal coverings become exceedingly flaccid, and offer but little resistance. Should you fail in this attempt, under gentle efforts, I should then recommend to you an excellent practice, advised by Denman. This consists in keeping the bladder thoroughly emptied, letting the patient drink but little, causing her to perspire as much as may be, and introducing the catheter some two or three times a day; the bladder being kept empty, the woman is placed with the pelvis inverted, for which purpose she ought to take her position on the knees and elbows. The longer time she passes in this posture the better; it may be necessary to use it for four hours together. She is not to give way merely on account of the fatigue, but to continue it as long as the replacement may require. Adopting this plan, the bladder being empty, the womb will sometimes return to its natural position, may be immediately, may be an hour or hours; but I think I may venture to add, that it pretty certainly returns at last. To this mode of treating the disease, I am exceedingly partial, because it requires nothing more than the introduction of the catheter, and the abstraction of the urine; there is no introduction of the

* The dragging of the meatus urinarius upward and backward, and the flattening of the urethra, will always render the use of the catheter rather difficult: but the operation will be facilitated by advancing the concavity of the instrument backward, and making use of a flattened catheter, similar to those recommended in certain cases of midwifery, in which the head of the fœtus presses upon the urethra in the same manner.—(Boivon and Duges on Diseases of the Uterus, by G. O. Heming, F.L.S. p. 82

hand into the vagina; no entrance of the fingers into the rectum—no force—no contusion—and no lacerations."

"Occasional plans of reduction.—Where you have seduously tried the above measures, and without effect, the retroversion, day after day, continuing, I would recommend you to allow the urine to accumulate afresh, to the amount of two or three pints, afterwards abstracting it by the catheter, and then, placing the patient on her knees and elbows, in order that you may have the full effect of gravity to help you, endeavour again to replace the uterus by means of manual operation. And in these cases I would further observe, there are three ways in which we may endeavour, manually, to replace the uterus. In the first place, we may content ourselves with merely placing in the vagina the fingers of the right hand, more or fewer of them, press the womb, and endeavour, at the same time, to urge the fundus above the brim. In the next place, placing the fingers into the vagina, and the thumb within the rectum, so as to get a double bearing on the uterus, we may attempt, by this double action, to carry the uterus above the brim. And lastly, if Dr. Hunter is to be our guide, one of the fingers of the left hand may be passed iuto the rectum, so as to get a bearing on the fundus uteri, which lies on the front of this bowel, and one or two fingers of the right hand may be rested upon the os uteri, and the bearings being obtained, the os uteri may be drawn downward when the fundus is elevated, and in this manner we may endeavour to urge the fundus above the promontory of the sacrum. This last mode appears plausible enough, when tried on machinery; but I am persuaded that, in most instances, it would be found to be very inapplicable in practice; in the first place, it requires the use of both hands, and the one must embarrass the other: then, too, it requires you to get hold of the os uteri, and bear downwards if you can; but what if you cannot? You may have a difficulty in reaching the os uteri; it may, too, become slippery from mucus; after your utmost endeavours, you may be unable to retain your hold. Practice, with experience, must lead you to choose for yourselves the one or the other of these three methods of performing the manual reduction; for myself, however, I decidedly prefer the second method of operating, by placing the fingers in the vagina, and the thumb within the rectum."

Having relieved the patient, and secured her from immediate danger, we have next to reflect on the plan of after treatment best calculated to restore health. These must be carefully remembered and assiduously employed. Let us now hear our author's advice:—

"Treatment after reduction.—When the reduction of the uterus has been effected, you should direct pour patient to continue in bed for two or three weeks. If there is any disposition to a return of the retroversion, you should advise her to place herself upon the knees and elbows, once or twice in the day, for an hour or more at a time; and you may direct her also to empty the bladder repeatedly in the course of the twenty-four hours, never suffering any large accumulation of urine to take place. Under this practice, the uterus may be expected to continue in its situation above the brim; because, in the course of a fortnight or three weeks, in the case of pregnancy, the uterus grows and enlarges so rapidly, that it becomes too bulky to admit of displacement. To these remarks let me add this caution, that after the bladder has been evacuated, and the womb has been replaced, you should always be on the watch for inflammation of the bladder or of the abdomen, for such inflammations may not unreasonably be expected to occur."

There are some cases of retroversion which cannot be reduced, and which are extremely embarrassing to the practical obstetrician. These must terminate fatally. The treatment of such cases is thus described:—

"Cases in which the retroverted womb cannot be reduced.—Now and then there are met with, cases in which a reduction of the retroverted position is attempted, but cannot be accomplished. The treatment here must vary, according to the effects of the pressure. If the urine can be drawn off by the catheter, or passed by the ordidinary efforts, and if the uterus does not compress the rectum with that degree of force which may prevent the discharge of its contents, it is unnecessary that you should interfere, but you should rather trust to the natural powers. As the womb enlarges, it may rise out of the pelvis more or less completely, and thus, day after day, the compression may become lighter and lighter, until, at last, it is removed altogether. It does not follow, therefore, because a womb remains retroverted, that the woman must necessarily die; and consequently, in attempting reduction, you ought to be careful not to use the higher degrees of force, as the case is not sufficiently desperate to justify it."

Every judicious obstetrician will readily applaud the prudence and judgment evinced in this extract. He here recognises the precepts of a master. A correct knowledge of anatomy and pathology will convince him of the danger of using of force, and the certainty of its being succeeded by uterine or abdominal inflammation. His motto is "*arte non vi*," in

these unfortunate cases. This leads him to other operations.

"Tapping of the bladder; section of the symphysis pubis.—It may happen where the womb remains retroverted, that under the pressure which it makes on the contiguous parts, neither the rectum nor the bladder can be cleared of their contents, as in Dr. Cheston's case, noticed already. Now, if the obstruction of the bladder is complete, and the accumulation of urine large, it is peremptorily necessary that something should be done, otherwise rupture of the bladder, and death, may follow.* In such cases it has been proposed† that we should tap the bladder; and, now and then, this practice would seem to be proper enough, and may, perhaps, be the only effectual mode of proceeding in some cases. It has been proposed further, if the reduction of the womb is prevented solely by a deficiency of room, that we should divide and open the symphysis pubis; Purcell, Gardien, and Cruickshank, recommended a measure of this kind. I am not aware that it was ever acted on under these circumstances; but if the case were well chosen, I can conceive it might be of use to the patient; at all events, it would render the introduction of the catheter more easy, and the room in the pelvis somewhat more capacious. Alarming as the operation is, it is far from being a fatal one; nevertheless, as I have never myself seen this operation performed, and, indeed, know of no case of retroversion in which it has been attempted, I do not venture to recommend it."‡

"Tapping of the uterus.—In a case of retroversion, where the catheter could not be introduced, nor the rectum emptied, I should myself feel inclined to consider the propriety of tapping the uterus, which might, perhaps, be found, on the whole, to be as desirable an operation as the tapping of the bladder, or the dividing of the symphysis pubis. I should not take a great trocar and canula, as if I were going to tap in a case of ascites, wounding a great many vessels, and perhaps occasioning death; but I should prefer an instrument of a very small size, by which I could perform a sort of acupuncturation. Perhaps an instrument, on the principle suggested, might be introduced into the uterus without much danger; and then, if a contrivance were fixed upon the other end of it, so as to bring away the fluid by a sort of suction, it may be that a good deal of the liquor amnii might be drawn off. If the uterus was thus evacuated of the liquor amnii, there would immediately be a considerable reduction of its bulk, and perhaps, at length, an expulsion of the ovum. The womb might be tapped either from the vagina or the rectum; but vaginal tapping would, I conceive, be preferable."

There is another operation which is sometimes required to save the life of the woman. This unfortunately involves the destruction of the ovum, which can never be justifiable, except to preserve the life of the parent.

"Destruction of the ovum.—In retroversion of the uterus requiring especial treatment, it would not, perhaps, be impossible to introduce some small, yet strong instrument, into the cavity of the uterus, along the mouth and neck, so as to break up the structure of the ovum, and, in that way, to give rise to its expulsion. It is very easy to conceive, that if the os uteri could be felt, and if an instrument could be carried into it, with which the ovum could be broken to pieces, an expulsion of the ovum might ensue. But be it remembered, all these measures are more or less hazardous; they are only to be had recourse to in those cases where there is no other hope; if the ordinary methods of reduction have been tried without avail, and the bladder is in danger of laceration, then are we justified in making attempts otherwise unwarrantable."

It is now ascertained that retroversion may persist during the whole term of utero-gestation; and therefore we should bear this fact in remembrance.

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* "Mr. Lynn, a surgeon in Suffolk, knew an instance of the urine becoming fatally extravasated in the abdomen, in a case of retroversion of the uterus, in consequence of the patient's refusal to submit to have the bladder punctured. In this case, the bladder burst or sloughed, and immediately afterwards the woman miscarried, but the uterus after death was found to be still displaced.—(Med. Observ. and Inq. p. 388)."

† "Sabatier proposed tapping the bladder; but others, from not having met with any instance in which the urine could not be drawn off by a catheter, or by Baudelocque's plan of raising the cervix uteri with the finger, do not agree to Sabatier's proposal." (Ed.)

‡ "Boivin, Duges, and others, question strongly the advantages derivable from such a measure, considering the pubic bones must be separated very far indeed to effect the replacement of the uterus."—(Ed.)

"Dr. Hunter advised the introduction of a trochar into the body of the uterus through the posterior parietes of the viscus so as to let off the liquor amnii. Such an operation has been performed, and with success. According to Boivin, Baynham appears to have done it, and Boyer quotes a second successful case recorded in the Recueil des Thèses de la Faculté de Paris."—(Ed.)

"Retroversion continuing throughout pregnancy.—A retroversion of the womb may happen in the earlier months, and so continue throughout gestation, even up to the time of parturition. Well then, what is to be done in these cases? Why, a retroversion of this sort is recorded by Dr. Merriman, a very solid and prudent practitioner, and the object of it is to prove, that the less the obstetrician interferes, the better. When first we examine internally in these cases, we find no os uteri whatever, for it lies above, out of reach, and the first impression made on the mind is, that the Cæsarian operation must be had recourse to; but if the practitioner suffer the woman to take her pains, the os uteri becomes gradually more and more expanded, and, as it enlarges, the inferior margin approaches nearer and nearer to the brim of the pelvis in front, till at length a segment of it can be felt in the region of the symphysis pubis; this segment descends, and enlarges more and more, until the head comes within reach, and the child is born, probably, if not in all cases, dead, the mother escaping, though not without much pain and difficulty. It appears, therefore, that in a retroversion of the uterus, either in the earlier or latter months, it does not necessarily follow, that yon ought to distrust the natural efforts."

Lastly, the disease under consideration may occur after parturition, and this we can readily understand, when we call to mind the size of the uterus after delivery. Dr. Blundell thus describes it:—

"Retroversion after delivery.—I have sometimes found a retroversion of the uterus occurring after parturition; and, on the whole, it is an accident, though not perhaps very frequent, yet it may, however, easily occur, for after delivery the womb is about as large as the head of a full-grown fœtus, and where the bladder has been suffered to become overloaded, after laborious labour, for example, the uterus is liable to become retroverted. In a case of this kind, you have only to draw off the urine, for as the womb becomes less and less every day after delivery, and the pressure gradually decreases, of course it is not necessary that any thing should be done as long as no symptoms press. If, indeed, after emptying the bladder, you can replace the womb with little effort, this ought to be done; but, on the other hand, if your attempts to reduce the uterus fail, content yourselves with emptying the bladder when needful, watching the symptoms with unceasing vigilance. Replacement might, perhaps, be obtained, as in the ordinary retroversion, by placing the patient on the knees and elbows, as formerly advised, but the propriety of this practice during the first few days after delivery may admit of a doubt."

The disease may also happen in the absence of pregnancy, when the uterine organs are relaxed.

"Retroversio uteri independent of pregnancy.—It does not follow that enlargement of the uterus from pregnancy alone, predisposes to retroversion, for the womb may be enlarged from scirrhus, polypus, mole, or hydatids, and especially by the two former; hence it may acquire the size of the fœtal head, and become retroverted. But here, however, owing to the slow growth of the uterus, except in cases of hydatids, the symptoms of pressure may supervene in a very gradual manner, there being much irritation about the bladder and rectum, joined with obstruction of the urethra, more or less complete, and this perhaps for weeks or months together, before the nature of the disease is ascertained. In these cases it is our main object to replace the uterus, if this can be effected; and to accomplish the point, we must proceed in the same manner as if we were attempting to replace the retroverted womb when pregnant. Of course, the replacement of the womb does not overcome the original disease.

"In different women, the womb varies much in its virgin size, for in some it is three times as large as in others. Now, if it so happen that the womb is very small, and that retroversion has taken place without impregnation, the pressure which it occasions may be so inconsiderable, that the nature of the case may remain unsuspected; but when the womb, though unimpregnated, chances to be of large size, especially if the pelvis is small or contracted, considerable pressure may be produced, and we are first led to investigate its nature in consequence of the irritation and obstruction of the rectum and the bladder, when the accident is soon recognised by the characteristics before given. The treatment of this case must proceed on the same principles as that of retroversion associated with gestation."

The last extract we shall make is on the prognosis of retroversion. This is a most important point, on which Dr. Blundell's opinion is of great value.

"Prognosis of retroversion.—With respect to the prognosis of retroversion, I have to remark, that where the womb is replaced, the patient in general does well enough, provided you proceed on the principles prescribed; yet it is not impossible that miscarriage may take place after a reduction; for in two or three instances I have known this take place. Inflammation of the bladder of the acuter kind may occur, and you may have a chronic disease of this organ. Where there is a good deal of inflammation, your patient may die of exhaustion. You may find that some officious hand has thrust a catheter through the back of the bladder into the peritoneum, and that

the escape of the urine into the peritoneal sac has destroyed the patient. The bladder, in some rare cases, may be burst open; or, as in one case which I saw myself, the ovary may be dropsical and ruptured, and this may assist in destroying the patient. So that although these retroversions are, on the whole, by no means very dangerous, it does not always follow, even when the womb is replaced with skill, that the woman will ultimately do well. Those cases are more dangerous and unfavourable where the retroversion of the uterus is connected with some other disease, whether enlargement by hydatids, or scirrhosity, or polypus, for when you relieve the retroversions, you are curing only that part of the complaint which depends upon displacement, while the original affection still continues in all its force."

Such is a specimen of the manner in which the valuable work before us is executed. We need no apology to any practical obstetrician for the article we have placed before him, nor to any one engaged in the practice of medicine. It is a work of supererogation for us to strongly recommend this treatise to every obstetrician. Every page of it abounds with instructive information, eminently calculated to remove, or relieve a vast deal of human suffering.

Lectures on the Nervous System, and its Diseases By Marshall Hall, M. D. F.R.S. L. and E. 8vo. pp. 171. 1836. Sherwood, Gilbert, and Piper.

The Practical Anatomy and Elementary Physiology of the Nervous System: designed for the Use of Students in the Dissecting Room. By F. Le Gros Clark, Demonstrator of Anatomy in St. Thomas's Hospital. 12mo. pp. 367. 1836. Longman and Co.

Dr. Marshall Hall is most favourably known both at home and abroad, by his numerous and very valuable productions. He now travels a new course, and takes up a subject which, in his opinion, requires renewed anotomical, clinical, and historical research; and to these he proposes to devote his future studies. He maintains some views, many of which he considers new; but most of them, if our recollection do not deceive us, have been already propounded by Dr. O'Beirne, in his appendix to his work on Defecation, which excited great interest at the late meeting of the British Association. Our author states his original views as follows:—

"1. I think it proper, in order to prevent any misapprehension relative to the claims of this little volume, and of the inquiry of which it is the sketch, briefly to state what are the principal original views which it sets forth.

"2. The first of these is that of a source of muscular action equally distinct from voluntary motion, and from motion resulting from the irritability of the muscular fibre.

"3. The second is that of a series of incident excitor nerves, and of reflex motor nerves, which, with the true spinal marrow as their centre or axis, constitute the true spinal system, as distinguished from the cerebral, through which that muscular action (§ 2) is excited.

"4. The third is that of the dependence of the ingestion and egestion of air and of food, and of the action of the orifices and sphincters of the body, upon this system.

"5. No physiologist has observed that the action of the larynx and pharynx, in deglutition and vomiting, and in respiration, and that of the sphicters, continually, depend upon the spinal marrow, and certain excitor and motor nerves.

"6. The eye-lids close when the eye-lash is touched, through the same agency of excitor and motor nerves, and of the spinal marrow.

"7 Respiration has been shown to depend upon the medulla oblongata. But this part of the spinal marrow has been erroneously supposed to be the resource and primum mobile of this function; whereas, I believe I have ascertained that the pneumo-gastric is that primum mobile, as the principal excitor nerve of the respiration.

"8. The action of the ejaculatores obviously depends upon the same excito-motory, or true spinal system.

"9. The fourth of these views is that of the true spinal system as the exclusive seat of convulsive diseases.

"10. The fifth, that of the same system as the seat of action of certain causes of disease, and of certain remedial agents.

"11. Legallois and Mr. Mayo have shown that distinct portions of the spinal marrow have distinct functions; but these functions have been confounded with sensation and with voluntary, or instinctive, motion, and have remained both unexplained, and without any application to physiology or pathology."

The author supports his views with much ingenuity and ability, and makes many suggestions of great practical interest. The work will be read with instruction by all classes of medical practitioners.

Mr. Clark's work is an account of the anatomy and physiology of the nervous system, intended as a manual for the dissecting room. The author has quoted all

modern authorities on the subject of which he treats. This book is what it professes to be, an accurate exposition of the physiology of the nervous system so far as it is known. The work is a valuable manual for the medical student and the established practitioner. It contains a vast deal of information on the nervous system, which, in a concise form, enables the reader to form correct opinions on the nature and treatment of a variety of troublesome and painful nervous and neuralgic affections.

Selections from the Phrenological Journal, comprising Forty Articles, chiefly by George Coombe, James Simpson, and Dr. Andrew Coombe. Edited by Robert Cox. 12mo. Edinburgh, 1836. Machlachlan and Stewart.

This work, as its title imports, is a reprint of papers from the early numbers of the Phrenological Journal, which commenced in 1823, and are out of print, though the work is now in its tenth volume. It was deemed advisable to republish, in a cheap form, the more interesting and instructive papers contained in the first five volumes.

In making the selection, the editor has endeavoured so to diversify the subjects treated of, as to show, in a forcible manner, the extensive applications of which phrenology is susceptible to human affairs. He has executed his task with taste and ability. The work is exceedingly curious and instructive to all classes of readers. It is suited to every taste, and ought to be in general circulation. It is much more diversified than many of the ephemeral publications now so much patronised by almost all classes of readers.

Analytical Anatomy.—The Circulation of the Blood as found in the Human Fœtus, and compared with that in the Four Classes of Vertebral Animals. By G. J. Martin Sainte-Ange, D.M.P. Translated from the French by T. W. Jones, D.M.P. London: Schloss.

This is one of those splendid engravings which emanate so frequently from the conceptions of our Gallic contemporaries; and which are so highly useful to medical students. It appears that this beautifully coloured and most accurate engraving was the result of an undertaking for which the *Academie des Sciences* offered a prize, for the best essay on the circulation of the blood in vertebral animals. M. Sainte-Ange informs us, that this table, as he terms it, is an abridgement of part of the researches which he has been making for several years past. He tells us—"The encouragement which I have received from this learned body (Acad. de Sc.), and the new results at which I have arrived, but more especially the great inaccuracy of the plates that have hitherto been published upon the circulation of the fœtus have induced me to examine and to collect in one treatise, whatever has any relation to the circulation of the blood in vertebral animals." The numerous figures, amounting to twenty-eight in number, contained in this plate, are splendidly executed, and give, perhaps, the best view of the circulation ever offered to the public. It is published at a moderate price, and if placed as a chart will form a curious—a striking ornament in every medical library, and in every surgery.

Non-identity of Blenorrhagia and Syphilis. Ulcerations in different parts of the Genito-Urinary Apparatus. Presented to the Academy of Medicine, August 15th ult., by Dr. Ricord.

Our readers are acquainted with the great researches of M. Ricord, on venereal diseases, which we exclusively brought before our brethren, in this journal, a short time ago, and which incontestibly proved the non-identity of syphilis and gonorrhœa. The following case is additional evidence of the truth of this conclusion.

A man, aged fifty-two years, was admitted into the Hôpital des Veneriens, April 2d, 1836, under the care of M. Ricord. He had previously had blenorrhagia four times. The last was followed by orchitis, eight days before his admission. This was followed by hydrocele which was punctured three successive times. On the 30th May his orchitis and hydrocele were cured, but the blenorrhagia was as violent as ever. The man left the hospital to pursue his ordinary avocations. He returned after some time with blenorrhagia; he speedily emaciated and died. On dissection it was found that there was ulceration of the urethra and prostate gland, a fact which proves, contrary to the three cases of Mr. Hunter, that the urethra may be ulcerated in gonorrhœa.

METROPOLITAN UNIVERSITY.

The charter of the Metropolitan University is at length published, and estab-

lishes an institution in London, which ought to have existed for centuries past. Degrees in law and medicine, exclusively, are to be conferred, and all recognised and perfect medical schools are admitted, and any future ones may be recognised by the Secretary of State for the Home Department. Englishmen of all religious denominations may now graduate in the learned faculties in the metropolis, and will be no longer excluded by the antiquated and bigotted regulations of Oxford and Cambridge, or compelled to leave their native country. This just and wise privilege is also granted to all British subjects, and we presume to all duly educated candidates for medical degrees, who may present themselves for examination.

CURE FOR BALDNESS.

At the wards of M. Lisfranc, M. Boucheron has presented four individuals who were affected with baldness for a long time, and whose hair was restored. One of the patients had been bald for twenty-three years, and, after a treatment pursued for five months, had his hair two inches in length, and after having been shaved at this period, the succeeding growth was profuse and strong.

The second patient suffered from hereditary baldness, and, at the time of examination, his hair was an inch and a half in length. The narrator showed several other cases in which a cure had been effected; and among these were some physicians, who declared that the frictions made with the ointment employed, did not produce any irritation or injury. It is unfortunate that the composition of the pommade used by M. Boucheron, is not revealed by its discoverer.—*Gaz. des Hopitaux, Aout. 27*, 1836.

TO THE EDITOR OF THE LONDON MEDICAL AND SURGICAL JOURNAL.

Sir,

I feel that I should not be doing my duty towards my professional brethren, if I withheld the following *important information.*

Your obedient Servant,

E. Crisp.

Walworth, Sept. 14, 1836.

A meeting of medical men took place last evening at Camberwell, to take into consideration the propriety of forming a Medical Club, *which had been recommended by the Poor Law Commissioners.* The matter was fully discussed, and on the following motion being put, "That it is highly inexpedient to form a Medical Club in this neighbourhood," I am proud to say, that more *thirty hands* were held up in favour of the motion, and only three against it; but the dissentients, *to their praise be it spoken,* rather than act in opposition to so great a majority of their professional brethren, agreed to have nothing to do with the Club!!

I will furnish you with the names of the gentlemen who attended the meeting at the earliest opportunity.

LITERARY INTELLIGENCE.

The Report of Sir David Barry and Dr. Corrie on the Medical Charities of Ireland will shortly be published. These gentlemen were appointed by Government, Commissioners for investigating the Management of Hospitals and Asylums.

LITERARY NOTICE.

In the Press, and will shortly be published, a Manual of Bed-side Physical Diagnosis, by Charles Cowan, M.D., Bath.

TO CORRESPONDENTS.

A Medical Student at Bristol.—It is necessary to have a good knowledge of Latin, but Celsus and Gregory are the works to be translated with the London Pharmacopæia. He may obtain all his education in the country, but it is usual to pass one winter and summer in London. The perpetual fee to all the Lectures, for the Royal College of Surgeons and Apothecaries Company, at the Hunterian Medical School, Great Windmill-street, Haymarket, is 34*l.* The examinations in Dublin and Edinburgh are more strict than in London.

I. I.—The hint will be attended to.

Z.—It would answer a bad purpose.

A Subscriber, Chelsea.—The Obstetric Plates will be resumed in a short time.

All communications, books for review, and advertisements, to be forwarded (postage free) to E. COX, Medical Bookseller and Publisher, St. Thomas's Street, Southwark; or to the Editor, 4, Great Queen Street, St. James's Park, Westminster Abbey.

THE

London Medical and Surgical Journal.

No. V. SATURDAY, OCTOBER 1. Vol. II.—(1836)

ACCOUNT OF THE LONDON HOSPITALS,

AND

SCHOOLS OF MEDICINE. SESSION 1836.

The first thing to be known by Medical Students, is the present Regulations of the Royal College of Surgeons, and of the Society of Apothecaries.

REGULATIONS OF THE COLLEGE OF SURGEONS.

The College of Surgeons requires candidates to bring certificates—

1. Of being twenty-two years of age.
2. Of having been five years in the acquirement of professional knowledge.
3. Of having studied Anatomy, and Physiology, by attendance on Lectures and Demonstrations, and by Dissections, during two anatomical seasons.*
4. Of having attended at least two courses of Lectures on Surgery, delivered in two distinct periods or seasons, each course to comprise not less than sixty Lectures.
5. Of having attended Lectures on the practice of Physic, on Chemistry, and on Midwifery, during six months; and on Botany and Materia Medica, during three months.
6. Of having attended during twelve months the surgical practice of a recognised Hospital in London, Dublin, Edinburgh, Glasgow or Aberdeen; or for six months in any one of such Hospitals, and twelve months in any recognised provincial Hospital.

* An anatomical season is understood to extend from October to April inclusive, and to comprise at least 140 Lectures on Anatomy and Physiology, occupying not less than one hour each, given on separate days; and at least 100 Demonstrations of the like duration, given in a similar manner, exclusive of Dissections, of which distinct certificates are required.

REGULATIONS OF APOTHECARIES' HALL.

The Apothecaries' Hall requires candidates to bring certificates of attendance on the following Courses of Lectures and Medical Practice.

Students whose attendance on Lectures shall commence on or after the first of October, 1835, will be required to produce proof of having attended, during three Winter and two Summer Sessions, Lectures in the following order, and Medical Practice from the commencement of the second, to the termination of the third Winter Session.

The Winter Medical Session is to be understood as commencing on the first of October, and terminating in the middle of April, with a recess of fourteen days at Christmas: the Summer Session as commencing on the first of May, and ending on the thirty-first of July.

First Winter Session.

Chemistry; Anatomy and Physiology; Anatomical Demonstrations; Materia Medica and Therapeutics.

Second Winter Session.

Anatomy and Physiology; Anatomical Demonstrations; Dissections; Principles and Practice of Medicine; Medical Practice of an Hospital.

Third Winter Session.

Dissections; Principles and Practice of Medicine; Midwifery, with attendance on cases; Medical Practice of an Hospital or Dispensary.

First Summer Session.

Botany; and such other branches of study as may improve the student's general education.

Second Summer Session.

Botany, if not attended during the

First Summer Session; Midwifery and Diseases of Women and Children; Forensic Medicine; Medical Practice of an Hospital.

The student is required to attend the Medical Practice of a recognised Hospital, from the commencement of the second Winter to the termination of the second Summer Session, and from that time to the end of the third Winter Session, at an Hospital, or recognised Dispensary.

August 15th, 1836.

"That Two Courses of Lectures on Midwifery consisting of Sixty Lectures, each (including examinations), may be attended at any time subsequent to the termination of the first Summer Session; and that Practical Midwifery may be attended at any period subsequent to the termination of the second Winter Session.

"The Court have been given to understand that the majority of students entertain a belief that no examination is instituted as to their attainments in this branch of study; they therefore trust that each lecturer will impress upon his class the fallacy of such an opinion, assuring their pupils, that in addition to the usual inquiries into the Anatomy, Physiology, and Pathology of the Uterine System, a strict investigation is made respecting their knowledge of every condition connected with the pregnant and puerperal states; and that the only point to which the examination does not extend, is that of delivery by instruments."

We commence with the most northern hospital, the *North London Hospital*, opposite to London University College. The hospital is situated at the farther end of Gower-street, and is divided from the College, in which the physicians and surgeons deliver their courses of lectures, only by the road. The prospectus of the hospital contains the following statement:—

1.—NORTH LONDON HOSPITAL.

Physicians.—Dr. Elliotson, Dr. Thomson, and Dr. Carswell.

Surgeons.—Mr. Samuel Cooper, Mr. Liston, and Mr. Richard Quain.

Medical and Surgical Practice.—Students are admitted to attend the Practice and Clinical Lectures on the following terms:—

For perpetual admission to the medical and surgical practice, 26*l.* 5*s.*; for attending during one year upon the physicians' and surgeons' practice, 21*l.*; for attendance during one year upon the physicians' or surgeons' practice separately, 15*l.* 15*s.*; for attendance during six months upon the physicians' practice separately, 15*l.* 15*s.*; for attendance upon the physicians' or surgeons' practice separately 10*l.* 10*s.*

(*Note.*) Their proportion of these fees has been relinquished by the physicians and surgeons of the hospital, and is devoted to the maintenance of the establishment.

Every student pays in addition to these fees, 10*s.* to the apothecary and 5*s.* to the secretary.

House surgeons' physicians' clerks' and surgeons' dressers are selected from the students without additional payments, preference being given to those who, with equal character, have obtained the highest honours in the medical classes of the University.

The physicians' and surgeons' visits are made daily at 12 and 1 o'clock during the Winter Term. Medical and surgical Clinical Lectures are given several times a week. Dr. Davis, Dr. Carswell, and Mr. Quain see out-patients daily in the morning.

The Museum of Anatomy is open to the medical students daily. The Medical Library is open from 9 till 8 during the Medical Session, and from 9 till 4 during the vacation.

LONDON UNIVERSITY COLLEGE MEDICAL SCHOOL.

The following are the subjects, the names of the lecturers, the days and hours of lecturing, and the fees,* in the medical school of this institution:—

Medicine, by Dr. Elliotson, daily, at 8; fees, 5*l.* and 8*l.*

Materia Medica, by Dr. A. T. Thomson, daily, except Saturday, at 3, P.M.; fees, 6*l.* and 9*l.*

Midwifery, by Dr. D. D. Davis, daily, at 9, A.M.; fees, 5*l.* and 7*l.*

Chemistry, by Dr. Turner, daily, at 10, A.M.; fees, 7*l.* and 10*l.*

Medical Jurisprudence, by Dr. A. T. Thomson, Tuesday and Thursday, at half-past 4 P.M.; fee 2*l.* 10*s.*

Anatomy, by Mr. R. Quain, daily, at 11, A.M., and daily dissections.

Anatomy and Physiology, by Dr. Sharpey, daily at 2.

* The first sum is for one course, and the second for perpetual attendance, and so with all the Schools.

Surgery, by Mr. S. Cooper, Monday, Wednesday, and Thursday, at 7; fees, 4*l.* 10*s.* and 6*l.*

Botany, by Dr. Lindley, Tuesday, Thursday, and Saturday, at 8 A.M.; fees, 2*l.* and 6*l.*

Comparative Anatomy, by Dr. Grant, daily, except Friday and Saturday, at 3; fee 4*l.*

Veterinary Medicine, by Mr. Youatt, to begin November 1; fee, 5*l.* and 7*l.*

Payments to the University for the Anatomy and Physiology:—*Demonstrative* and *Practical Anatomy*—For the entire term 5*l.*; first division 3*l.*; second division 3*l.* Perpetual, 8*l.* *Anatomy* and *Physiology*—the entire course, 7*l.*; first division, 4*l.*; second division, 3*l.* Perpetual 10*l.*

Lectures on Zoology, by Professor Grant, will commence on the 1st of February next, fee, 2*l.*; and those on Fossil Zoology, on the 1st of April, fee, 1*l.*

Attendance on Dr. Grant's Courses of Comparative Anatomy and Zoology is recognised by the Army Medical Board as equivalent to the course of Natural History required as a qualification for Army Surgeons.

2.—MIDDLESEX HOSPITAL.

Physicians.—Dr. Hawkins, Dr. Watson, and Dr. Wilson.

Surgeons.—Mr. Mayo, Mr. Arnott, and Mr. Tuson.

Medical Practice.—For three months' attendance, 6*l.* 6*s.*; for 6 months, 10*l* 10*s*; for nine months, 12*l.* 12*s.*; for twelve months, 15*l.* 15*s.*; perpetual, 22*l.* 0*s.* Apothecary's fee, 1*l.* 1*s.*

Surgical Practice.—Dresser, for 12 months, 31*l.* 10*s.*; for six months, 21*l.*; other pupils, for twelve months, 21*l.*; for six months, 15*l.* 15*s*; for three months, 10*l.* 10*s.*

The house-surgeons are elected from the dressers, agreeably to the date of their entrance. A pupil is allowed 3 months dressing during the term of his pupilage, by paying 10*l.* 10*s.* extra. Clinical Lectures are promised to be given by all the medical and surgical officers of the hospital.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.

Medicine, by Dr. Copland, Monday, Tuesday, Thursday, and Friday, at 3 P.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Materia Medica, by Dr. Macreight, Tuesday, Thursday, and Saturday, at 9 A.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Midwifery, by Mr. Sweatman, Tuesday, Thursday, and Saturday, at 10 P.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Chemistry, by Mr. Everitt, Monday, Wednesday, and Friday, at 10 A.M.; fees, 6*l.* 6*s.*

Medical Jurisprudence, by Dr. Leighton, Wednesday and Saturday at 3 P.M. fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, Physiology, with Demonstrations, by Sir C. Bell, Mr. Tuson, and Mr. Shaw, daily, at 11 A.M., and 2 P.M.; fees, 8*l.* 8*s.* and 21*l.* 0*s.*

Surgery, by Mr. Arnott, Monday, Wednesday, and Friday, at 9 A.M.; fee, 5*l.* 5*s.*

Botany, (during the Summer); fee, 3*l.* 3*s.*

Pupils can enter perpetual to all the above lectures by one payment of 45*l.*

The pupils will have admission to the Museum and Botanical Garden, and the use of a Library and Reading Room provided with the various Medical and Scientific Periodicals

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3.—ST. GEORGE'S HOSPITAL.

Physicians.—Drs. Chambers, Seymour, Wilson, and Macleod. *Assistant Physician,* Dr. Hope.

Surgeons.—Mr. Keate, Sir B. Brodie, Mr. Hawkins, and Mr. Babington. *Assistant Surgeons,* Mr. Walker and Mr. Cutler.

Medical Practice.—For nine months, 12*l.* 12*s.*; for twelve months, 16*l* 16*s.*; perpetual pupils, 25*l.* 4*s.*

Surgical Practice.—For six months, 15*l.* 15*s.*; for twelve months, 21*l.*; perpetual pupils, 52*l.* 10*s.*

Patients received on Wednesdays. Operations on Thursdays, at 1 o'clock. The physicians and surgeons attend almost daily, at half-past 12 o'clock.

Medicine, by Drs. Macleod and Seymour, Monday, Wednesday, and Friday, at half-past 11 A.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Materia Medica, by Drs. Seymour and Macleod, Tuesday, Thursday, and Saturday, at half-past 11 A.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Midwifery, by Dr. Robert Lee, Monday, Wednesday, and Friday, at 9 A.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Chemistry, at the Royal Institution, Tuesday, Thursday, and Saturday, at 9 A.M.; fees, 6*l.* and 8*l.* 8*s.*

Medical Jurisprudence, by Dr. Hope, Monday and Friday, at 6 P.M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, at adjoining Schools.

Surgery, by Mr. C. Hawkins and Mr.

G. Babington, Monday, Wednesday, and Friday, at 8 P.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Dr. Dickson, in the Summer; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Pupils entering to the Lectures on Surgery, may attend the Clinical Lectures given by Sir Benjamin Brodie, in the hospital, on each Tuesday during the season.

SCHOOLS ADJOINING ST. GEORGE'S HOSPITAL.

ST. GEORGE'S HOSPITAL SCHOOL OF ANATOMY AND MEDICINE,

Adjoining the Hospital, No. 1, Grosvenor-place.

Medicine, by Drs. Wilson and Wood; Monday, Wednesday, and Friday, at 8 P. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Materia Medica, by Dr. Wood and Mr. Ancell, Monday, Wednesday, and Friday, at half-past 11 A. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Midwifery, by Mr. Stone and Dr. H. Davies, Monday, Wednesday, and Friday, at 9 A. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Chemistry, at the Royal Institution, Tuesday, Thursday, and Saturday, at 9 A. M.

Medical Jurisprudence, by Messrs. Broughton and Willcock, Tuesday and Thursday, at 6 P. M.; fees, 3*l.* 3*s.* and 4*l.* 4s.

Anatomy and Demonstrations, by Dr. Wilson and Messrs. Lane and Harrison, daily, at half-past 10, A. M., and half-past 2 P. M.; fees, 6*l.* 6*s.* and 16*l.* 16*s.*

Surgery, by Messrs. R. Liston and Walker, Monday, Wednesday, and Friday, at 7 P. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Mr. Hayes, in the Summer; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Interval for attendance on the practice of St. George's Hospital, from half-past 12 to half-past 2. The students have admission to the museum of the school. Dr. Wilson and Mr. Walker give Clinical Lectures in the hospital.

The above is a long-established school, at which large numbers of the students who enter to the practice of St. George's Hospital, enter as pupils.

ST. GEORGE'S HOSPITAL.—THEATRE OF ANATOMY.

Kinnerton-street, Wilton-place.

A course of lectures on Anatomy, Physiology, and Surgical Anatomy, will be delivered at this school, by Mr. Tantum and Mr. H. J. Johnson. A lecture will be given daily at half-past 2 o'clock during the season. The lectures will commence on the 1st of October, and terminate about the middle of the ensuing May. The operations of the surgery will be shown during the latter part of the course.

A course of Demonstrations of Practical Anatomy, with Dissections, will be delivered by Mr. H. J. Johnson and Mr. H. C. Johnson. A demonstration will be given daily, during the course, at half-past 10 A.M., commencing on the 10th of October, and terminating early in the ensuing May.

Lectures.—One course, 6*l.* 6*s.*; perpetual, 8*l.* 8*s.*

Demonstrations and Dissections.—One course, 6*l.* 6*s.*

Perpetual to lectures and demonstrations, 16*l.* 16*s.*

4.—WESTMINSTER HOSPITAL.

Physicians.—Dr. J. Bright, Dr. Roe, and Dr. Burne.

Surgeons.—Sir A. Carlisle, Mr. White, Mr. Guthrie, and Mr. B. Lynn.

Medical Practice.—Six months, 10*l.* 10*s.*; nine months, 12*l.* 12*s.*; twelve or eighteen months, 15*l.* 15*s.*; perpetual, 21*l.*

Surgical Practice.—Six months, 12*l.* 12*s.*; perpetual, 21*l.*

A surgical pupil at the end of twelve months may, if approved by the surgeons, become house surgeon, on paying 105*l.* The office of dresser is held by turns, according to the time of entrance, for two weeks at a time.

WESTMINSTER SCHOOL OF MEDICINE.

Medicine, by Dr. Burne, Monday, Wednesday, and Friday, at 9 A.M.; fees, 5*l.* 5*s.* and 6*l.* 6*s.*

Materia Medica, by Dr. Steggall, Monday, Wednesday, and Friday, at 11 A.M.; fees, 5*l.* 5*s.* and 6*l.* 6*s.*

Midwifery, by Messrs. North and Griffith, Tuesday, Thurday, and Saturday, at 11 A.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Chemistry, by Mr. Crump, Tuesday, Thursday, and Saturday, at 9 A.M.; fees, 5*l.* 5*s.* and 6*l.* 6*s.*

Medical Jurisprudence, by Mr. Crump, Monday and Thursday, at 10 A.M.; fees, 3*l.* 3*s.*

Anatomy and Demonstrations, by Messrs. Malyn, Hilles, and Handcock, daily, at 10 A.M., and half-past 2 P.M.; fees, 11*l.* 11*s.* and 15*s.* 15*s.*

Surgery, by Messrs. Guthrie and Thompson, Monday, Tuesday, and Wednesday, at 5 P.M.; fees, 5*l.* 5*s.* and 6*l.* 6*s.*

Botany, by Mr. Thurnam, Monday, Wednesday, Friday, and Saturday, at 6 P. M.; fees, 3*l.* 3*s.*

Perpetual admission to all the Lectures, 45*l.*

Clinical Lectures will be delivered at the Hospital by the physicians and surgeons.

5.—ST. BARTHOLOMEW'S HOSPITAL.

Physicians.—Dr. Hue, Dr. Latham, and Dr. Roupell.

Surgeons.—Mr. Vincent, Mr. Lawrence, and Mr. Earle.

Assistant Physicians.—Dr. G. Burrows, Dr. F. Farre, Dr. Jeafferson.

Medical Practice.—For an unlimited period, 31*l.* 10*s.*; for eighteen months, 15*l.* 15*s.*; for nine months, 12*l.* 12*s.*

Surgical Practice.—For 12 months, 26*l.* 5*s.*; (students who have entered for twelve months are considered to be perpetual pupils to the surgical practice); for six months, 18*l.* 18*s.*—*As Dresser.* For twelve months, 52*l.* 10*s.*; for six months, 31*l.* 16*s.*

Hours of attendance of the physicians and surgeons.—Dr. Hue, Monday, half-past 11; Thursday, half-past 12; Saturday, half-past 11. Dr. Latham, Monday, half-past 12 during the Winter, 8 A. M., during the Summer; Tuesday, half-past 12 during the Winter, 8 A. M. during the Summer; Friday, 8 A. M. Dr. Roupell, Monday, half-past 12; Wednesday, half-past 12; Friday, half-past 12. Mr. Vincent, Tuesday, half-past 12; Thursday, half-past 12; Saturday, half-past 12. Mr. Lawrence, Monday, half-past 12; Wednesday, half-past 12; Friday, half-past 12. Mr. Earle, Tuesday, half-past 12; Friday, half-past 12; Saturday, half-past 12.

One of the assistant physicians attends daily (Sundays excepted), between the hours of 11 and 2, at the physicians' out-patient's room, to prescribe for the medical out-patient's and casualty cases. Surgical operations on Saturday, at 1 o'clock.

Medicine, by Drs. Latham and Burrows, Tuesday, Thursday, and Saturday, at 7 P. M.; fees, 5*l.* 5*s.* and 7*l.* 7*s.*

Materia Medica, by Dr. Roupell, Tuesday, Thursday, and Saturday, at 10 A. M.; fees, 4*l.* 4*s.* and 6*l.* 6*s.*

Midwifery, by Dr. Hugh Ley, daily, except Saturday, at 6 P. M.; fees, 3*l.* 3*s* and 5*l.* 5*s.*

Chemistry, by Mr. Brande, Monday, Wednesday, and Friday, at 10 A. M.; fees, 4*l.* 4*s.* and 8*l.* 8*s.*

Medical Jurisprudence, by Drs. Roupell and Burrows, (in the Summer); fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, Physiology, and Demonstrations, by Messrs. Stanley, Wormald, and M'Whinnie, daily, at 9 A. M., and half-past 2 P. M.; fees, 8*l.* 8*s.* and 21*l.*

Surgery, by Mr. Lawrence, Monday, Wednesday, and Friday, at 7 P. M.; fees, 5*l.* 5*s.* and 7*l.* 7*s.*

Botany, by Dr. F. J. Farre, (in the Summer); fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Comparative Anatomy, by Dr. A. Farre, Tuesday and Friday, at half-past 2 P. M.; fees, 1*l.* 8*s.* and 2*l.* 2*s.*

The Museum of Anatomy is open daily, (Sundays excepted,) from 11 o'clock to half-past 2. The curator attends in the Museum daily from 11 o'clock to half-past 2, to explain to the students of the Anatomical Class any preparations they may be desirous of examining.

The Librarian attends every day at the Library to distribute books. Gentlemen who have entered to the Medical or Surgical Practice of the Hospital, or to two Courses of Lectures delivered at the Hospital, are entitled to become subscribers to the Library. Each subscriber, on payment of 1*l.* 10*s.* is entitled to the use of the Library for an unlimited period; or, on payment of 1*l.* 8*s.* to the same privilege for one year.

The Reading Room is open every day (Sundays excepted,) for the use of the students. This room is devoted exclusively to the purposes of study. Gentlemen who have entered to the medical or surgical practice of the Hospital, or to any course of lectures delivered at the Hospital, are entitled to the use of this room.

Inspections of Morbid Anatomy will take place in the Pathological Theatre, as opportunities occur, at 11 o'clock; of the medical cases, by Dr. Pardoe and Mr. Wormald; of the surgical cases, by the house-surgeons.

6.—LONDON HOSPITAL.

Physicians.—Dr. Frampton, Dr. Billing, Dr. Gordon.

Surgeons.—Mr. Andrews, Mr. John Scott, Mr. Luke.

Physicians' Pupils.—Twelve months, 10*l.* 10*s.*; perpetual, 21*l.*; apothecary's fee, 1*l.* 1*s.*

Surgeon's Pupil.—Twelve months, 21*l.*; ditto, as dressing pupil, 31*l.* 10*s.*; six months, ditto, 21*l.*; library, 1*l.* 1*s.*

Clinical lectures by Dr. Billing, Dr. Gordon, Mr. Scott, and Mr. Luke; Lec-

tures on Morbid Anatomy by Mr. T. Blizard Curling.

Medicine, by Dr. Davies and Dr. Cobb, Monday, Tuesday, Thursday, and Friday, at half-past 8 A. M. ; fees, 4*l.* 4*s.* and 7*l.* 7*s.*

Materia Medica, by Mr. Pereira, Tuesday, Thursday, and Saturday, at half-past 3 P. M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Midwifery, by Dr. F. Ramsbotham, Tuesday, Thursday, and Saturday, at 10 o'clock ; fees, 3*l.* 3*s.* and 7*l.* 7*s.*

Chemistry, by Mr. Pereira, Monday, Wednesday, and Friday, at 10 A. M.; fees, 4*l.* 4*s.* and 8*l.* 8*s.*

Medical Jurisprudence, by Dr. Cobb, Dr. F. H. Ramsbotham, and Mr. Framptom, Saturday, at half-past 3 P. M. ; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, Physiology, and Operations of Surgery, by Messrs. Luke, Hamilton, and Adams, daily, at half-past 2 P. M. ; fees, 5*l.* 5*s.* and 10*l.* 10*s.*

Anatomy, with Dissections, &c., by Messrs. Hamilton and Adams, daily, from 11 till 4 o'clock ; fees, 3*l.* 3*s.* and 10*l.* 10*s.*

Surgery, by Mr. John Scott, Monday, Wednesday, and Friday, at 7 P. M. ; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Messrs. Pereira and Quekett, daily, at 3 P. M. ; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Comparative Anatomy, by Mr. W. J. Little, in the Spring.

7.—ST. THOMAS'S HOSPITAL.

Physicians.—Dr. Williams, Dr. Roots, and Dr. Burton.

Surgeons.—Mr. Travers, Mr. Green, and Mr. Tyrrell.

Medical Practice.—Physician's pupil, two years, 24*l.* 3*s.* ; one year, 15*l.* 15*s.*

The physicians make their visits daily, at 1 o'clock; Dr. Williams on Mondays and Thursdays ; Dr. Roots on Wednesdays and Saturdays ; Dr. Burton on Tuesdays and Fridays. Dr. Lister sees the out-patients on Tuesdays and Thursdays, at 11 o'clock.

Clinical lectures will be given to the Physician's pupils weekly, either by Dr. Williams, Dr. Roots, or Dr. Burton.

Surgical Practice.—Dresser, one year 51*l.* 2*s.* ; six months, 32*l.* 12*s.*

Surgeon's pupil, one year, 26*l.* 6*s.* ; six months, 20*l.* ; a second entry, if within two months, 6*l.* 12*s.*

The surgeons make their visits daily. Mr. Travers on Mondays and Thursdays, at 1 o'clock ; Mr. Green on Wednesdays and Saturdays, at 1 o'clock ; Mr. Tyrrell on Tuesdays and Fridays, at half-past 1 o'clock. Mr. South sees the out-patients on Mondays and Wednesdays, at 11 o'clock. On Friday Operations are performed.

Clinical Lectures will be given to the dressers and surgeon's pupils, weekly, either by Mr. Travers, Mr. Green, Mr. Tyrrell, or Mr. South.

Pupils entering to the surgical practice of St. Thomas's Hospital, are allowed to attend that of Guy's.

The admission-day for patients is Tuesday, at 10 o'clock precisely. Accidents and cases of emergency are received at all hours. Post-mortem examinations at 1 o'clock, by Dr. Barker. The distribution of prizes will take place in the Spring. Mr. Whitfield, apothecary to St. Thomas's Hospital, is empowered to enter gentlemen who may wish to attend any of the above lectures, or the practice of the Hospital. Gentlemen who enter to the practice or the lectures at this Hospital are allowed the use of the library and of the reading-room, so long as they continue attending as pupils.

Medicine, by Dr. Williams, Monday, Wednesday, and Friday, at 11 A. M. ; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Materia Medica, by Dr. Burton, Monday, Wednesday, Friday, and Saturday, at 9 P. M. ; fee, 4*l.* 4*s.*

Midwifery, by Dr. Rigby, daily, except Saturday, at 9 P. M. ; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Chemistry, by Mr. R. Phillips, Tuesday, Thursday, and Saturday, at 11 A.M., and Monday, at 12; fees, 4*l.* 4*s.* and 6*l.* 6*s.*

Medical Jurisprudence, by Dr. Lister and Mr. R. Phillips, Tuesday and Friday, at 12 o'clock ; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, &c., and Demonstrations, by Messrs. Mackmurdo and Solly, and Messrs. B. Travers, junior, and Mr. Clarke, daily, at half-past 2 P. M., and 10 A. M. ; 10*l.* 10*s.* and 18*l.* 18*s.*

Surgery, by Messrs. Travers and Tyrrell, Monday and Friday, at 8 A. M., and Wednesday, at 7 A. M. ; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Mr. J. Hayes, not till April ; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Lectures on Morbid Anatomy, by Dr. Barker, on Wednesday, at 12 o'clock.

8.—GUY'S HOSPITAL.

Surgeons.—Mr. Key, Mr. Morgan, and Mr. Bransby Cooper.

Physicians.—Dr. Cholmondeley, Dr. Bright, and Dr. Addison.

Medical Practice.—Physician's pupils, perpetual, 24*l.* 4*s.* ; one year, 15*l.* 15*s.*

Surgical Practice.—Surgeon's dresser, one year, 51*l.* 2*s.* ; six months, 32*l.* 12*s.*

Surgeon's pupil, 12 months, 26*l.* 6*s.* ; six months, 20*l.* ; a second entry within two months, 6*l.* 11*s.*

Pupils entering to the surgical practice of Guy's Hospital are allowed to attend that of St. Thomas's. The Clinical Wards will open as usual the first week in November, when Clinical Lectures will be given by the physicians. Clinical Lectures and Instructions will be given by the surgeons.

There is an Eye Infirmary attached to the hospital, of which Mr. Morgan is surgeon, with an assistant, (Mr. Jalland Edenborough,) open on Mondays and Fridays, at 12 o'clock, for lectures.

Sir Astley Cooper, Bart. is announced in the prospectus as Consulting Surgeon.

Those pupils only who have entered to the practice at Guy's Hospital, or the Surgical Lectures, will have the privilege of attending the Eye Infirmary, Obstetric Institution, Library, and Reading Room. Pupils permitted to visit the Botanic Garden, subject to regulations. Mr. Stocker, Apothecary to Guy's Hospital, is authorised to enter pupils to any of these Lectures, &c.

Medicine, by Drs. Bright and Addison, Monday, Wednesday, and Friday, at half-past 3 P. M.; fees, 4*l.* 4*s.* and 8*l.* 8*s.*

Materia Medica, by Dr. Addison, Tuesday, Thursday, and Saturday, at half-past 3 P. M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Midwifery, by Dr. Ashwell, daily, at half-past 8 A. M. ; fees, 3*l.* 3*s.* and 10*l.* 10*s.*

Chemistry, Messrs. Aikin and Taylor, Tuesday, Thursday, and Saturday, at a quarter before 10 A. M. ; fees, 4*l.* 4*s.* and 8*l.* 8*s.*

Medical Jurisprudence, by Mr. A. Taylor, Monday and Friday, at a quarter before 10 A. M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, &c., by Messrs. Cooper and Cock, daily, at 2 P. M. and 11 A.M.; fees, 8*l.* 8*s.* and 21*l.*

Surgery, by Messrs Key and Morgan, Tuesday, Thursday, and Friday, at 8 P. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Messrs. Johnson and Bird, Tuesday, Thursday, and Friday, at 12 o'clock ; fee, 3*l.* 3*s.*

Morbid Anatomy, by Dr. Hodgkin, Tuesday, Thursday, and Friday, at half-past 6 P. M.; fee, 2*l.* 2*s.*

Comparative Anatomy, by Mr. T. Bell, Monday and Wednesday, at a quarter before 7 P. M.; fee, 2*l.* 2*s.*

Mr. Thomas Bell will give the lectures on the Anatomy and Diseases of the Teeth. Lectures on Electricity, Galvanism, and other Branches of Experimental Philosophy applicable to Medicine, by Mr. Golding Bird, on Mondays, at 8 P. M. The Rev. F. D. Maurice, Chaplain to the Hospital, will resume his lectures on Moral Philosophy on Wednesday, at 8 P. M.

The above lectures are so arranged, as not to interfere with each other, nor with the physician's and surgeon's practice.

SCHOOLS ADJACENT TO HOSPITALS.

9.—HUNTERIAN SCHOOL OF MEDICINE, FOUNDED BY DR. WILLIAM HUNTER, 1771, 16, *Great Windmill-street, Haymarket.*

Medicine, by Dr. Ryan, daily, except Saturday, at 4 P. M.; fees, 4*l.* 4*s.* and 5*l.* 5*s.*

Materia Medica, by Dr. Epps, daily, except Saturday, at 9 A. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Midwifery, by Dr. Ryan, Tuesday, Thursday, and Saturday, at 7 P. M.; fees, 3*l.* 3*l.* and 4*l.* 4*s.*

Chemistry, by Dr. H. Lane, daily, except Saturday, at 9 A. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Medical Jurisprudence, by Dr. H. Lane, daily, except Saturday, at 11 A.M.; fees, 2*l.* 2*s.* and 3*l.* 3*s.*

Anatomy, Physiology, Demonstrations, and Surgery, by Mr. Lucas, daily, at 11 A. M., and 3 P. M. ; fees, 7*l.* 7*s.* and 10*s.* 10*s.*

Surgery, by Mr. Wardrop, Monday, Wednesday, and Friday, at 7 P. M.; fee, 5*l.* 5*s.*

Botany, by Dr. Epps, daily, except Saturday, at 9 A. M ; fees, 2*l.* 2*s.* and 3*l.* 3*s.*

Perpetual to all these Lectures, 34*l.*

Comparative Anatomy and Physiology, by Dr. R. Grant.

The Students will, under certain regulations, have the advantage of a Library and a Reading Room, and admission to the Museum.*

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* This school is situated in the centre of the west end of the town, and is contiguous to the North London, Middlesex, St. George's, the Westminster, and Charing Cross Hospitals and Schools. The perpetual fee to the Hunterian School of Medicine is 34*l.*, which in other establishments is 50*l.*

10.—BLENHEIM-STREET SCHOOL OF MEDICINE.

No. 1, Bleinheim-street, Oxford-street.

(Founded by the late Joshua Brookes, F.R.S.)

Anatomy, Physiology, Morbid Anatomy, and the Principles of Comparative Anatomy, every day at a quarter to 3, by Mr. King and Mr. W. J. E. Wilson, (late teacher at the London University); one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

Demonstrations and Dissection, twice every day,* by Mr. Wilson and Mr. Jones; one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

Medicine, three days in the week, by Dr. Weatherhead and Dr. Litchfield; one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

Surgery and Surgical Operations, four days in the week, by Mr. King; one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

Chemistry and Pharmacy, three days in the week, by Dr. R. D. Thomson; one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

Materia Medica, three days in the week, by Dr. Weatherhead; one course, 3*l.* 3*s.*; two courses or perpetual, 4*l.* 4*s.*

Botany, by Mr. Toase; one course, 2*l.* 2*s.*; two courses or perpetual, 3*l.* 3*s.*

Midwifery and the Diseases of Women and Children, three days in the week, by Dr. Richmond and Dr. Hening; one course, 3*l.* 3*s.*; two courses, or perpetual, 5*l.* 5*s.*

The Application of Bandages, by Dr. Cutler.

Medical Jurisprudence, by Dr. Litchfield and W. Theobald, Esq.; one course, 2*l.* 2*s.*; two courses, or perpetual, 3*l.* 3*s.*

11.—HUNTERIAN THEATRE OF ANATOMY.

37, Little Windmill-street, Haymarket.

Lectures on Anatomy, Physiology, Pathology, and Surgery, by Mr. John Gregory Smith, formerly house surgeon at St. George's Hospital, commencing on Monday the 3d. of October. A lecture will be given, daily, at 3 o'clock

The course of Anatomical Demonstrations and Dissections, by Mr. J. G. Smith and Mr. Prescott G. Hewett, will commence on Monday, the 10th of October, at a quarter past 10 A. M., and will be continued daily at the same hour.

Catechetical examinations will be held twice a week. The dissecting-room is spacious and well ventilated, and replete with every convenience.

Each course of lectures, 3*l.* 3*s.*; each course of demonstrations, 3*l.* 3*s.*; perpetual to both, 10*l.* 10*s.*

The theatre is conveniently situated within five or ten minutes walk of St. George's, Middlesex, Westminster, North London, and Charing-Cross Hospitals—the London University, and the King's College, Medical Schools.

The Museum of Human and Comparative Anatomy will be open to the pupils on all occasions.

Midwifery.—Dr. Jewel will give a course of lectures on Midwifery, and the Diseases of Women and Children, at this theatre, commencing on Tuesday, the 4th of October, at 7 P. M.

The lectures will be given on Tuesdays, Thursdays, and Saturdays, at 7 P. M. The pupils may attend the practice of "The Royal Lying-in Hospital, or Hospital for Clinical Midwifery," at 10, Queen-street, Great Windmill-street, Haymarket.

Students who have entered to other Obstetric Lectures will be admitted to these lectures and the practice of the hospital, on payment of half the perpetual fee.

Unlimited attendance, 5*l.* 5*s.*; each course, 3*l.* 3*s.*; to include the practice of the hospital.

12.—ANATOMY AND SURGERY.

Winter lectures, demonstrations, and private catechetical instruction, on anatomy, physiology, and surgery, by Mr. Dermott, will commence at his lecture and dissecting rooms, Westminster Dispensary, 9, Gerard-street, Soho, on Tuesday, October 4, at 3 o'clock P. M.

Perpetual to the Anatomical and Surgical Lectures, Demonstrations and Dissections, certificates of all of which are recognised by the Royal College of Surgeons, 10*l.* 10*s.*

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* One course of Demonstrations will be given at half-past 7 in the morning.

Pupils can enter perpetual to all the above lectures, as required for examination by the Royal College of Surgeons and Society of Apothecaries, by one payment of 35*l.* 15*s.* Those who enter to any one course, can attend the practice of the Infirmary for Diseases of the Skin, and the Dispensary attached to the School, free from expense.

Hours of Lecture from 3 to 4 P. M. Demonstrations from 10 to 11 A. M. Dissections during the whole of the day. Surgical Lectures are delivered in the evening. The introductory Lecture on Comparative Anatomy, &c., will be delivered at 3 o'clock P. M., on Tuesday, October 4, 1836.

13.—ALDERSGATE SCHOOL OF MEDICINE,
Near St. Bartholomew's Hospital.

Medicine, by Dr. J. Hope, Monday, Wednesday, and Friday, at a quarter-past 8, P. M.; fees, 4*l.* 4*s.* and 5*l.* 5*s.*

Materia Medica, by Mr. Pereira, Tuesday, Thursday, and Saturday, at half-past 11, P. M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Midwifery, by Mr. Walford, Monday, Wednesday, and Friday, at a quarter past 6 P. M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Chemistry, by Mr. Pereira, Tuesdays, Thursdays, and Saturdays, at 10 A. M.; fees, 3*l.* 3*l.* and 6*l.* 6*s.*

Medical Jurisprudence, by Dr. W. Cummin, Monday, and Wednesday, at 10, A. M.; fees, 2*l.* 2*s.* and 3*l.* 3*s.*

Anatomy, Physiology, and Demonstrations, by Messrs. Skey and Rees, daily, at 9, and at half-past 2, P. M.; fees, 6*l.* 6*s.* and 12*l.* 12*s.*

Botany, by Messrs. Pereira and Quekett, in the Summer; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Comparative Anatomy, by Dr. R. Grant, Tuesday and Thursday, at 6 P. M.; fee, 1*l.* 1*s.*

Surgery, by Mr. Skey, Tuesday, Thursday, and Saturday, at 7 P. M., fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Unlimited to Anatomy, Demonstrations, and Surgery, 15*l.* 15*s.*

Pupils are allowed to enter to the Lectures on Chemistry, and Materia Medica, conjointly, on the following terms:—One course of Chemistry, and one of Materia Medica, 4*l.* 4*s.*; two courses of each, 7*l.* 7*s.*; unlimited, to both, 8*l.* 8*s.* Pupils, when duly qualified, will have ample opportunities of attending labours, free of expense.

Unlimited attendance to all the Lectures, required by the Royal College of Surgeons in London, and the Apothecaries' Company, 35 guineas.

A Medical Society and Library are attached to the school.

14.—FREE HOSPITAL SCHOOL, GREVILLE-STREET, HATTON-GARDEN,
Near St. Bartholomew's Hospital.

Courses of Lectures will be commenced at this School on Monday, October 3.

Anatomy, Physiology, and Pathology, by Mr. Greville Jones.

Materia Medica, by Mr. J. Barnes.

Medical Jurisprudence, by Mr. Barnes and Mr. Bishop.

Demonstrations and Superintendence of Dissections, by Mr. G. Jones, and Mr. Gay.

Students will have opportunities of Practising CHEMICAL MANIPULATION under the superintendence of Mr. Bishop.

15—MIDWIFERY.

Course of Lectures on Midwifery, and the Diseases of Women and Children, will be delivered by Dr. Waller, at 93, Bartholomew Close, near the eastern gate of St. Bartholomew's Hospital, Consulting Accoucheur to the London Midwifery Institution, commencing on Wednesday, October 5, 1836, at a quarter before six P. M., and continued every succeeding Monday, Wednesday, and Friday, at the same hour.

Single courses 3*l.* 3*s.*; two courses 4*l.* 4*s.*; perpetual, 5*l.* 5*s.*

Pupils will be supplied with cases from the London Midwifery Institution.

16—FINSBURY DISPENSARY,
29, *St. John-street, Smithfield.*

Physicians.—J. S. Campbell, M. D., John Thomson, M.D. F.L.S.

Surgeon.—George Macilwain, Esq.

Medical pupils are admitted to the practice of the above institution on the following terms:—The full time required by the Apothecaries' Company, 7*l.* 7*s.*; six months, 4*l.* 4*s.*; perpetual 10*l.* 10*s.*

The dispensary is situated in the immediate vicinity of St. Bartholomew's Hospital, and admits, annually, nearly 5,000 patients.

Clinical Lectures, it is stated, will be given on all important cases which occur in the practice of the institution.

17.—MR. GRAINGER'S SCHOOL.
Webb-street, Maze Pond, Borough, near St. Thomas's Hospital.

Medicine, by Dr. Whiting, Monday, Wednesday, and Friday, at a quarter before 4 P. M.; fees, 4*l.* 4*s.* and 6*l.* 6*s.*

Materia Medica, by Dr. Whiting and Mr. Everitt, Tuesday, Thursday, and Saturday, at a quarter before 4 A. M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Midwifery, by Dr. F. H. Ramsbotham, Monday, Wednesday, and Friday, at 7 A. M.; 3*l.* 3*s.* and 6*l.* 6*s.*

Chemistry by Mr. Cooper, Tuesday, Thursday, and Saturday, at a quarter before 10 A.M.; fees, 5*l.* 5. and 6*l.* 6*s.*

Medical Jurisprudence, by Dr. S. Smith and Mr. Cooper, (in the Summer.)

Anatomy, Physiology, and Demonstrations, by Messrs. Grainger, Pilcher, and E. Barron, daily, at half-past 2 P.M., and at a quarter before 11 A.M.; fees, 11*l.* 11*s.* and 15*l.* 15*s.*

Surgery, by Mr. Pilcher, Tuesday, Thursday, and Saturday, at 7 P.M.; fees, 3*l.* 3*s.* and 5*l.* 5*s.*

Botany, by Dr. Dickson, daily, at half-past 8 A.M.; fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Gentlemen entering to the lectures on Medicine have the privilege of attending gratuitously the practice of Dr. Whiting at the Surrey Dispensary.

Gentlemen entering to the lectures on Medical Jurisprudence have the privilege of attending gratuitously the practice of the London Fever Hospital.

Gentlemen entering to the lectures on Surgery have the privilege of attending gratuitously the surgical practice of the Surrey Dispensary.

The Museum will be open several hours every day for the admission of students. The meetings of the Webb-street Medical Society are held every alternate Saturday evening, at 8 o'clock.

18.—MEDICINE.

Dr. C. J. Roberts will give a course of Lectures on the Theory and Practice of Medicine, at 31, New Bridge-street, Blackfriars.

A lecture will be delivered on each Monday, Wednesday and Friday, at 10 o'clock in the morning.

One course 3*l.* 3*s.*; unlimited, 5*l.* 5*s.*

19.—KING'S COLLEGE MEDICAL SCHOOL.

Medicine, by Dr. Watson, Monday, Wednesday, and Friday, at 9 A.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Materia Medica, by Dr. J. F. Royle, Monday, Wednesday, and Friday, at 11 A.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Midwifery, by Dr. R. Fergusson, Tuesday, Thursday, and Saturday, at 11 A.M.; fees, 3*l.* 3*s.* and 6*l.* 6*s.*

Chemistry, by Mr. J. F. Daniell, Monday, Wednesday, and Friday, at 2 P.M.; fees, 4*l.* 4*s.* and 10*l.* 10*s.*

Medical Jurisprudence, by Dr. J. F. Fergus, (in the Summer); fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Anatomy, &c., by Mr. R. Partridge, and Mr. H. Latter, daily at 2 P.M. and daily at 10 A.M.; fees, 4*l.* 4*s.* and 9*l.* 9*s.*

Physiology, by Dr. R. B. Todd, daily, at 3; fees, 4*l.* 4*s.* and 9*l.* 9*s.*

Surgery, by Mr. J. H. Green, Monday, Wednesday, and Friday at 7 A.M.; fees, 4*l.* 4*s.* and 6*l.* 6*s.*

Botany, Mr. David Don, (in the Summer); fees, 3*l.* 3*s.* and 4*l.* 4*s.*

Comparative Anatomy, by Mr. T. R. Jones, Tuesday and Thursday, at 8 P.M.; fees 2*l.* 2*l.* and 4*l.* 4*s.*

Fee for *unlimited attendance* upon all the lectures required by the regulations of the College of Surgeons and the Society of Apothecaries, 63*l.*

Those who are desirous of attending Medical and Surgical Lectures at King's College, have the option of entering either as King's College medical students, to go through the entire course of professional study required by the College of Surgeons and the Society of Apothecaries, or as occasional pupils, to attend the lectures of particular professors.

The regular students of the College have access to the general, as well as to the medical library, and are allowed the use of the books. They alone are permitted to wear the College gown. They trust that all who belong to the class of King's College students of medicine and surgery, will be regular in their attendance at divine worship in the College Chapel on Sundays in the forenoon; and they hope that the students may avail themselves of the opportunities of religious instruction offered by the lectures of the Principal

Special certificates are given for general correctness of conduct in the College, and for regularity of attendance at divine service: also to those students who profit by the lectures on religious and moral subjects. A dining-hall will be opened in College in October, 1836.

Museums of Materia Medica, Botany, Geology, and Mineralogy, a Chemical Laboratory, and Libraries, are attached to the College, to which, under proper regulations, the students have daily access. The curator is in constant attendance in the Anatomical Museum, and will devote an hour every day, viz. from one to two o'clock, for the purpose of explaining the preparations to the students.

Those who desire it, have the opportunity of attending a course of Medical Latin, for which the fee is 3*l.* 3*s.* each term. The course will occupy four hours in each week.

The interval for hospital attendance is between 12 and 3, including the time allowed for going and returning.

19.—CHARING-CROSS HOSPITAL SCHOOL.

Lectures on Medicine, by Dr. Shearman, commence on the 3rd of October, at 11 o'clock in the forenoon, and will be continued on Mondays, Wednesdays, Thursdays, and Fridays, at the same hour.

Single course, 3*l.* 3*s.*; unlimited attendance, 5*l.* 5*s.*

Lectures on Midwifery, and the medical treatment of Women and Children, by Dr. Chowne, will commence on Monday, October, 3rd, at 6 o'clock in the evening, and be continued every succeeding Monday, Wednesday, and Thursday, at the same hour.

Single course, 3*ls.* 3*s.*; unlimited attendance, 5*l.* 5*s.*

Lectures on Morbid Anatomy, by Mr. Howship, will commence on Thursday, October 6, at 5 o'clock, P. M.; and will be continued on each succeeding Thursday through the Session, at the same hour.

A single course, 2*l.* 2*s.*; unlimited, 4*l.* 4*s.*

Mr. Howship also lectures on Surgery; one course, 3*l.* 3*s.*; unlimited, 5*l.* 5*s.*

At the end of one of the prospectuses of the above lecturers, we find the following statement, which is most probably a hoax :—

"Charing-Cross Hospital Practice—Medical, six months, 10*l.* 10*s.*; for the full period required to qualify, 15*l.* 15*s.* Surgical, ditto, 10*l.* 10*s.*; ditto, ditto, 15*l.* 15*s.* Both Medical and Surgical Practice, for the full period required to qualify, 26*l.* 5*s.*"

There are few medical students who visit London to acquire professional information, who are not recommended, either by their friends or acquaintances, to enter at some particular school, and for this reason it is only necessary to offer hints to those, who come to the metropolis as perfect strangers, and have no friendly or competent advisers. To these then we shall give some useful information.

In the first place, all the *perfect* schools of medicine, are recognised by the College of Surgeons, Societies of Apothecaries and by the Army, Navy, and East India Medical Boards, and all are precisely on the same footing in the estimation of the Examining Boards, so that the certificates for attendance of all are equally received.

Secondly, the terms for attendance on lectures and Hospital practice, are widely different, as will appear immediately.

Thirdly, the Hospital Medical Schools are much more expensive (though the course of education is precisely the same in these, as in the rival schools unconnected with hospitals), than the latter the difference of amount being for medical education, and medical and surgical practice from 20*l.* to 60*l.* In proof of this statement we shall quote our contemporary the *Lancet*:—

"On taking a view of the Hospitals, there is one institution which stands forward from the rest in bold and brilliant relief. We allude, of course, to the NORTH LONDON HOSPITAL, the institution which forms the clinical branch of the medical department of LONDON UNIVERSITY COLLEGE. The facts which we are about to relate in connection with this establishment, ought to operate forcibly on the minds of those medical students —both on the feelings and the judgments of those young gentlemen—who are on the point of paying their money for attending the practice of a hospital in this metropolis. There are three circumstances relating to this establishment, which ought to render it an object of admiration and attachment with all the junior branches of the profession. The first is the limited charge, as compared with that at all the other hospitals, for 'perpetual attendance, on the whole of the practice of the institution.' Secondly, the circumstance that the hospital was *avowedly instituted for the purpose of furnishing clinical instruction in medicine*; and thirdly, and mainly, the adoption of the Concours, and the consequent bestowal of the valuable office of HOUSE SURGEON upon *those students who may prove themselves to be endowed with the highest amount of professional attainments.*

"Besides all these distinguishing advantages, the offices of Physicians' clerks, and dressers to the Surgeons, are conferred as *gratuitous rewards* on those gentlemen who, "with equal moral character, have obtained the highest honours in the medical classes of the University." In no other hospital of the metropolis are there to be found similar advantages. With regard to economy, the saving of expense by entering as a "perpetual pupil" to the medical and surgical practice of the NORTH LONDON HOSPITAL, is a most important consideration. A specification of the terms of admission to the practice of the whole of the hospitals in

London, will place this in a very obvious light:—

	£	s.
St. Bartholomew's Hospital.		
Surg. Prac., Dresser, 12mos. 52 10 / Med Prac., perpetual..... 31 10	84	0
St. George's Hospital.		
Surg. Prac., perpetual..... 53 10 / Med. Prac., perpetual..... 25 4	77	14
Guy's Hospital.		
Surg. Prac., Dresser 12mos. 51 2 / Med. Prac., perpetual..... 24 4	75	6
St. Thomas's Hospital.		
Surg. Prac., Dresser, 12mos. 51 2 / Med. Prac., 2 years..... 24 3	75	5
Middlesex Hospital.		
Surg. Prac., Dresser, 12mos. 31 10 / Med. Prac., perpetual..... 22 0	53	10
London Hospital.		
Surg. Prac., Dresser, 12mos. 31 10 / Med. Prac., perpetual..... 21 0	52	10
Westminster Hospital		
Surg. Prac., perpetual..... 21 0 / Med. Prac., perpetual..... 21 0	42	0
North London Hospital.		
Perpetual to both Medical and Surgical Practice.....	26	5

"But suppose we compare the 26*l.* 5*s.* charged at the North London Hospital, with the sums charged at the other hospitals for attendance to pupils who are not dressers. The charge, even then (the attendance, also, on the surgical practice being limited to twelve months) will be more than 30*l.* higher at St. Bartholomew's (for instance), and more than 24*l.* higher at Guy's Hospital (as another instance), and more than 51*l.* higher at St. George's, (perpetual *there* to both) than the charge at the North London Hospital. But observe.

"Notwithstanding the difference in the amount of the charge for the opportunity of attending the entire medical and surgical practice in this institution, the offices of dresser, house surgeon, and clinical clerk, are not sold for fifty and seventy guineas a-piece, as in most of the corrupt hospitals of this metropolis, but are, with dignified liberality, awarded by the officers of the institution to the most industrious and accomplished of the students. Besides, the patients are attended in this hospital with a degree of regularity which is not exhibited in any other medical charity in London. Moreover, in the delivery of the clinical lectures by the physicians and surgeons, two other distinguishing traits are prominent,—the first consisting in the excellence of the matter delivered; and the second, in the punctilious regularity with which the clinical discourses are communicated to the pupils. On looking at the names of the physicians, it will be seen that they are those of distinguished men in the profession, and the list of surgeons embraces the names of Liston, Samuel Cooper, and Richard Quain. The last named gentleman is already distinguished as one of the most successful teachers of anatomy in the metropolis, the second is the celebrated author of the "Surgical Dictionary," and Mr. Liston has for some time been renowned as the first operator among British surgeons. But his practice in the hospital, and his lectures and other published works, prove that his capability of forming a correct diagnosis is of the highest order, and that, as a pathologist, he has few equals, and no superiors. If the justly-distinguished, and far-famed Astley Cooper is ever to have a successor, in this metropolis, Mr. Liston will be the man.

"Thus officered,—the economical entrance fee for "perpetual attendance," on the whole of the practice of the institution, and the opportunity of belonging to the class-rooms of the distinguished professors in University College,—with the Concours, to boot, in the hospital, and the freedom from charge for filling the offices of dresser and clinical clerk,—where is the student in whose mind the advancement, the dignity, and the utility of his profession, forms a subject of the slightest consideration, who would fail, *cæteris paribus*, to show a decided and unequivocal preference for the North London Hospital.

"Another surgeon, of just and wide celebrity, a gentleman whose truly invaluable lectures have, on many occasions, adorned our pages, has, we find, once more been prevailed upon to resume the Chair of Surgery in one of our medical theatres. We allude to the announcement of Mr. Wardrop's appearance as a lecturer in the Hunterian School of Medicine, in Great Windmill-street. There is no hospital in immediate connection with this establishment, but, fortunately for those students whom circumstances may induce to enter to the practice of the hospitals in the vicinity of that institution, the lectures on surgery by Mr. Wardrop will be delivered nearly in the centre of a wide-reaching district, which includes several extensive medical charities. The enlightened views which Mr. Wardrop has long entertained on medical policy, and the masculine comprehensiveness of mind which he has shown in the investigation of medical subjects, have rendered his name and abili-

ties objects of the highest respect among the general practitioners of this country. We rejoice to observe that he is again in the field, occupying the path which was trodden with so much fame by ABERNETHY, when insisting that MEDICINE was but ONE SCIENCE, and that quacks and charlatans alone would arbitrarily divide that science in practice into "physic" and "surgery."

Are we to infer that the demand for lectures on Comparative Anatomy is on the increase? We ask this question, because we observe that Professor GRANT, of *London University College*, is not only advertised to deliver lectures on that deeply interesting branch of science in his own college, but that he is to be similarly occupied in the medical school of Great Windmill-street, (the Hunterian School,) and that of Aldersgate-street. A course of lectures on PHYSIOLOGY is also to be delivered by that highly-gifted teacher, at his own residence. Dr. GRANT cannot be thus extensively engaged without conferring immense advantages on the students of this metropolis, and on the entire community. Justly do his powers of mind, and his vast researches, entitle him to the designation given to him by his colleague, Professor TURNER,—that of "The English CUVIER."

CHANGES IN THE SCHOOLS.

"The changes which have taken place in the medical schools since the commencement of last session are, as usual, very numerous. Amongst them are the following. The instability of occupation which characterises the teachers in the medical theatres, affords palpable evidence of the looseness and defects in the frame-work of the present system of lecturing. Few, indeed, are the teachers who seem capable of acquiring a *reputation* in the schools. Such variations of position, and such incessant resignations of chairs, are not characteristic of sound plans of education.

In St. Bartholomew's Hospital School, Dr. HUE has resigned the chairs of Medicine and Chemistry, the former of which is now occupied jointly by Dr. LATHAM and Dr. BURROWS; the latter by Mr. BRANDE. In the London Hospital School, Dr. BILLING no longer lectures on Medicine. Dr. COBB occupies his place, and Mr. PEREIRA delivers the lectures on Materia Medica, abandoned by Dr. COBB. Dr. A. FRAMPTON will this year give the lectures on Medical Jurisprudence, last year delivered by Dr. COBB and Mr. PEREIRA.

The *Middlesex Hospital School* has lost Sir CHARLES BELL, and Mr. MAYO fills his place to lecture on Surgery. In the *St. Thomas's Hospital School*, Mr. Tyrrell has ceased to lecture on Anatomy, and Messrs. MACLEAN and SOLLY fill the post which Mr. T. has vacated.

Mr. GRAINGER no longer lectures on Surgery at the Webb-street School. The duty devolves on Mr. PILCHER. The demonstrator of 1835, Mr. Millard, is deceased. In the Aldersgate School, Dr. HOPE supplies the place of Dr. M. Hall, as lecturer on medicine. Dr. Wetherhead has left the Westminster Hospital School, and Dr. STEGGALL lectures there on Materia Medica in his place, and Mr. D. O. EDWARDS is replaced by Mr. THURNAM, as a lecturer on Botany. At King's College, both the Hawkins' have departed, and Dr. WATSON gives the lectures there on Medicine, and Dr. J. F. ROYLE those on Materia Medica; while Dr J. F. FERGUS has taken the Medical Jurisprudence, which Dr. Watson has abandoned, and Mr. MAYO is supplanted as lecturer on Anatomy and Physiology, by Mr. PARTRIDGE and Dr. TODD: Mr. ARNOTT takes the place, in Surgery, of Mr. GREEN, and the lectures on Botany are given for the first time by Mr. DON. The *Charing-Cross Hospital School* (the Hospital having altogether exploded) is stripped of its lectures on Surgery, Anatomy, and Materia Medica, in the persons of Mr. PETTIGREW, Mr. LUCAS, and Dr. SIGMOND. Dr. GOLDING has ceased to share in the lectures on Midwifery, and Mr. MAUGHAM has resigned the Chemistry. At the *Hunterian School of Medicine*, Mr. WARDROP this year gives the lectures on Surgery (his course commencing on Friday, October 7th, at 7 o'clock in the evening); Professor GRANT gives a course of Comparative Anatomy and Physiology, Mr. LUCAS has taken the place of Mr. DERMOTT as a lecturer on Anatomy, and Dr. H. LANE gives the Chemistry for the first time. At *London University College*, Dr. SHARPEY takes the place of Dr. QUAIN, and Mr. R. QUAIN has been made joint professor of Anatomy.

At the *St. George's Hospital School*, Grosvenor-Place, Dr. WOOD has taken the place of Dr. STEVENS as a lecturer on medicine.

Even this long list of alterations could be increased. In fact, of 99 lecturers

who, four years ago, were lecturing in London, not less than 56 have since changed places, or wholly retired from the vocation."

Fourthly, the student should enter perpetual to some school, by which he will save a vast deal of time, as the lectures are so arranged in each, as not to interefere with each other, and to economise the time of the student. There is a great deal of time lost by attending certain lectures in different schools, more especially when distant from each other, and from the hospital, and recognised dispensaries. It is also to be stated, that a student saves his money by entering perpetual to one school; and this enables him to attend certain lectures elsewhere if he please, during the second or third year of his studies.

Fifthly, the student should visit all the lecture rooms during the first twenty-one days of October, as all are open to him free of expense; hear the different teachers, enquire into their characters, and determine those whose mode of lecturing he thinks likely to convey to him the most instruction. He can learn during this period the popularity of each lecturer, the estimation in which he is held as an original author, as a practitioner, and for his punctuality in the discharge of his duty in the lecture-room, and in the hospital or dispensary.

Sixthly, the respective professors will afford the student every information, as to the time of registering admission tickets at the Royal College of Surgeons and Society of Apothecaries, as to the effect of the different codes of Regulations, as to the best books to be procured, and to the mode of study which should be followed.

Lastly, the student should be most attentive to his lectures and studies; because the time prescribed by the constituted authorities is much too short for acquiring a good professional education; and therefore, no part of it ought to be wasted or idled away in visiting places of amusement, and the unnumbered sources of enticement afforded by the metropolis. The medical student should never miss a lecture, in the hospital, or dispensary, unless on account of indisposition, or some important circumstance; for he will find at the end of his studies, even when prosecuted with exemplary diligence, that he will be seldom prepared or qualified to appear before the Examining Boards for their diplomas. Impressed with this conviction, he must perceive that in wasting his time, he prolongs his stay in the metropolis, incurs an additional expense, dissappoints the expectation of his relations and friends, depreciates his own character, and may almost ruin it, by rejection at his examinations. Notwithstanding all the senseless clamour raised against the Royal College of Surgeons and Society of Apothecaries, for requiring so much time to be occupied in acquiring medical instruction, we speak advisedly, and after many years experence in teaching, when we state that there is not one student in one hundred, who ventures to appear before either Court of Examiners, at the expiration of its prescribed terms. This clearly shows the absolute necessity of industry and zeal on the part of the student. We have known many who spent five, others ten years, and some even a longer time, before they appeared at the Examining Boards; but they were idle, inattentive, or dissipated. We indite these remarks, as the sincere friends of medical students in general; and as acutely sensitive for the success of those with whom we shall be henceforth connencted. We say to all "persevere and you shall succeed," *labor omnia vincit.*

THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE VIII.

Operation for Strangulated Hernia.

Well; I always divide the sac to the very confines of the stricture; and where I feel the latter with the knife, I must say I do not fear hemorrhage, and for that reason I treat the sac in the manner I have mentioned; but the way in which the dilatation of this membrane is to be accomplished demands a few brief observations. A small orifice being effected, a director is introduced, passed towards the stricture, and laid in contact with the internal surface. In many cases we see it shining through the membrane, and when that is thick and opaque, we judge altogether by the touch. We must be sure that no part of the contents be interposed. Where this cannot be

determined by sight it may be ascertained with the finger. We move the instrument about, to be certain it is fairly introduced, and to disengage it from any fold with which it may become entangled.

We endeavour to make the sac glide upon it, that we may have full assurance that the next step can be taken with safety. We cut on the director, applying perpendicularly the edge of the knife, near its point, and pressing during the whole time the director to the sac, as if we desired to lift it away from the parts beneath it. When the opening is sufficiently enlarged to admit a finger, the director is withdrawn, and the remainder of the sac is divided in its neck by the guidance of the former. The palmar surface of the finger is laid against the contents, which it presses backwards, while a button pointed bistoury, carefully passed along the dorsal surface, is employed to perform the remainder of this stage of the operation. In proportion as this division advances to the upper angle of the wound, it is accomplished with decreasing facility. The cut sac looses its tension, it is retracted, and sinks among the deep and moveable parts which often surround its cervix. The finger in the wound can exercise no stretching power to bring it within the influence of the knife. If we endeavour to cut by withdrawing the instrument, we will not succeed; and if we pass it as a wedge, towards the angle of the wound, we will be equally dissappointed. Difficulty and delay may be removed by pulling the sac towards the operator. In cases of large size this may be done with the fingers of an assistant, or where room does not permit their application, the same end may be obtained by hooking the bowel remaining at the bottom of the sac, with the end of a strong probe, formed into a convenient curve.

You are to understand, every thing which has now been done is preparatory to the division of the stricture. Of course the next point after we have ascertained the condition of the bowels, is to determine, with as much precision as we can, the exact situation which the stricture holds. Inspection is impossible. Blood, depth, the contraction of some parts, and the spreading of the unbound intestine, oppose difficulties, which we cannot remove. We are, therefore, compelled to trust at the same time to the intelligence and guidance of the finger. The nail searches round the first aperture with which it meets. We endeavour to insinuate it beneath the margin, and we form our judgment from the opposition which exists to this criterion preceding. If the nail is easily admitted by the aperture first encountered, we may conclude that the stricture holds a more retired position. On the other hand, if the aperture is narrow, and its boundaries are both tense and firm, we are quite safe in the inference, that it forms a principal impediment to reduction. When I have had any doubt, I have treated the matter in this way: with one finger close upon the orifice, I have moderately pressed the protusion with the other hand; I have witheld and renewed this effort, until the sentinel finger reported whether or not any partition of the contents appeared to pass through the aperture committed to its vigilance. If the affirmative were indicated, I sought for the obstruction in some more internal part; if the negative, I shaped my course so as to enlarge the opening, with a full certainty that I would thus remove all existing restraint. These observations apply only to constriction by the abdominal parietes, and are not to be supposed to have any reference to strictures dependant on changes in the neck of the sac. However, even here, I humbly presume to think, we are far from being deprived of diagnostic guidance. Stricture of the neck of a sac, perhaps, never occurs unless where trusses have been badly adjusted, and carelessly worn. The cause is externally applied, and the consequence is found in the same situation. This form of stricture is within reach; and although this narrowness of the neck of a sac may sometimes coincide with an abdominal aperture, or be concealed in the oblique extent of an abdominal passage, still its existence may be ascertained, in the present exposed state of the parts, by pulling the membrane, as if it were intended to withdraw it from the cavity of the abdomen. During this effort, the stricture will be found to change its external relations, at one time approaching the touch, and at another time retiring from it, according as the traction, I have mentioned, is exercised or witheld.

In these diagnostics my attention was first directed during operation. Failing in my attempt to dilate the neck of a sac, by causes which have been already explained, I availed myself of the expedient by which such a difficulty may most effectually be surmounted. During this process, a peritonæal stricture, which I

did not expect to prevail, was brought within my reach. My search was directed to the abdominal parietes; but, when accident threw the discovery in my way, I delayed all final proceedings, and I paused while I engaged myself in a brief but satisfactory examination. The aperture I hurried to enlarge was free, and the neck of the hernia enjoyed through it an easy but limited motion. Having given you the inference drawn from this portentous occurrence, I can add no more, than that experience in one other case confirms their force, that in both the parietal orifices escaped unnecessary dilation, that success attended each operation, and that pathology appears to justify the remarks I have just now submitted to you.

We have now proceeded so far, we may suppose every thing to be prepared for dilating the parietal aperture of descent. So that our next concern is to ascertain, the moment in which this step, the most essential of all, can be accomplished with safety, with adequatenesss for the present, and without any prospective bad consequences.

Upon this subject, the first principle I desire to establish in your mind is, that a very small incision, the division of a few fibres, at the utmost not exceeding a quarter of an inch in length, will be amply sufficient for requisite purposes. All the practice I have seen, all the experience I have personally had, assure me that more is unnecessary. Although I am here treating especially on acute inflammatory strangulation, in which, in general, strictured bulk has a comparatively inconsiderable size, I feel I may extend the remark to all forms of herniæ, even the greatest of these now exposed to examination. If this statement be a truth, it is surely one from which much confidence may be derived. It removes the embarrassing idea of insecurity, and inspires the timid operator with that proper degree of boldness which is to be regarded as almost indispensable to success.

The wound of an artery, and the injury of an intestine, are the only dangers to which this stage of the operation is exposed. With respect to the former, you are in possession of my opinion; and you know for the greater part the reasoning on which that opinion is founded. But, supposing those vessels to lie in situations, in which the pathologist unquestionably finds them. Say, they occupy the very margin, and the point of that margin, which it seems most convenient and most necessary to divide. Yet, I am assured, they are endangered in a proportion far below that, at which their risk is usually rated. Here are several preparations in which, the border of the aperture of descent, and the course of an artery most perfectly coincide, in consequence of a certain extent of developement of the disease. The coincidence appears to forbid an operation in every point, where such an intimate relation exists. To provide against all hazard, I am an advocate for listening with all due regard to the lesson which is here so plainly and so impressively placed before our senses. Obedient to its importance, I would search for another and a safer site for my incision; but, when such cannot be discovered, I would go forward with confidence, even in these alarming instances of such correspondence of parts as would appear to render a wound of the arteries almost an inevitable result of such a proceeding. The encouragement I offer, is drawn from practice, and rests on facts. To speculate in a case of so much moment, would be more than unpardonable. I have divided a ring, through the very edge of which an artery of considerable size beat against my finger. There was no mistake—death exposed all to examination. The stricture was amply divided and an an obturator artery had escaped untouched. To encounter peril without pure thought, betrays a mind insensible to every degree of responsibility. There is no quality in a surgeon more reprehensible than that which produces operative rashness. In his eye, the life of his brother man can have little value, and his acts proclaim his degrading disregard of the sacred mandate prohibitory of murder. I durst not dare to have made a venture through so much seemingly certain danger, without calculating the chance of escape. On these I had long meditated. My reflections were publicly explained over the dead body, before I had the boldness to apply them to the purposes of the living. I considered the subject in the following manner:—Arteries, which hold the position described as to hernial openings, are invariably surrounded with cellular membrane, lax in tissue, and freely permitting of a lateral motion of the vessel, both from and towards the neck of the sac, but most in the former direction, and I say this is invariably the case, because, I never saw an exception to the fact, no matter how distended, changed in structure, or otherwise altered, the parts may have been which formed the boundaries of the open-

ing. The condition of arteries thus imbedded in cellular substance, from what I had observed in the common operation of arteriotomy at the temple, I conceived to be favourable to their resistance of a knife applied to divide them by a wedge-like pressure. On the exposed artery of a living dog, I made the experiment which I now repeat on the dead subject. The essential phenomena are alike, and the results in both instances correspond. I lay bare the radial artery at the wrist, I force a sharp bistoury beneath it, and apply its edge to the vessel. I raise the instrument; the artery is drawn from its bed into an arch, suffering no other violence than mere disturbance, as long as the loose investing membrane has the power of yielding. Indeed, even then the knife does not prick through, the elastic structure of the artery enabling it, as it were, further to elude the pressure I employ. Now, however, being extended to the utmost, it gives way, and the force with which it returns to its natural situation may give you some idea of the power I employed. This is very much what we observe in bleeding at the temple. The lancet is dipt in at one side of the artery, which is pushed before it until it is made tense at the opposite side, when the motion of withdrawing the instrument accomplishes the required division.

You can thus understand how it happens that the first hemorrhage is often seen at the angle of the wound, while that which subsequently takes place issues from a point nearer to the centre. These circumstances appear to me to teach you how the obturator vessel escaped in my operation. The mobility of the vessel seems to be our source of safety, and the wedge-like use of the knife makes that safety doubly sure; while both serve to explain the reason why arterial injury has been so seldom inflicted by an operation, so frequently once performed without those anatomical guidances which we enjoy.

The following is the manner of proceeding which I have adopted, and which I recommend you to pursue in the division of all hernial apertures. Presuming that the sac has been slit up through the cervix, the index finger is to be introduced in search of the seat of stricture. This is done most conveniently by placing its dorsal surface in contact with the contents of the sac, and advancing it until the concave point of the nail hitches on the aperture. All is concealed from view, and we must rely on the intelligence we receive from this mode, our only one of exploration. The cases are indeed few, in which the point of the nail cannot be insinuated between the intestine and the margin of the opening. Having thus ascertained the situation and the degree of stricture, the position of the fingers must be changed. Advanced to the point to be divided, its palmar surface is laid on the protruded bowel, which it presses away to defend it from all chance of injury, while the convex surface of the nail is being aimed to be introduced under the border of the aperture. The bistoury I shew you, narrow in the blade fixed in the handle, with its probe blunt point, and an edge obtuse to a small distance from that point, is recommended to us for our next purposes by Sir Astley Cooper. I believe I may say it is his invention, and the whole profession acknowledge its provisional sufficiency. This instrument is to be passed along the finger, and is to be so disposed until it is placed beneath the stricture, that the uppermost surface of the blade shall exactly correspond with that precise part on which its edge is next to act. When the blunt end has been placed at a proper distance within the opening of descent, the relation of the surface of the knife is to be changed. The back should rest on the finger, which should not shift from its position, while the cutting edge is directed to the very thing it is intended to divide. Matters are so far prepared for the final movement on which all relief and all security depend. If you push the bistoury with a cutting motion to a more internal distance, the stricture yields, but an artery may perchance suffer; if you pull it towards you, to say thê least, you are disappointed in the object for which it was used. But if its edge be properly disposed, if the back be kept firm on the nail, and the handle be thus moved, so as to increase the angle between the instrument and the finger, what is necessary is done with rapid promptness and complete security. This is the only manœuvre by which we can be certain of the extent of the incision. We feel the part yields; we absolutely hear the noise of sundering crispness, and we judge of the gap we have made with all the certainty of what I shall now call mechanical evidence.

The required division is accomplished; it is but small, it does not exceed a quarter of an inch, it need not be more extensive. In proof of its adequacy, the hernia often

starts back into the cavity of the abdomen. You will find this to happen. No sooner will the incision be made than the protrusion sometimes disappears. But this is only when it is small, and, perhaps, recent, or when it reappears after a long period of absence. In hernia of very inconsiderable size, I have often observed the tumour to remain after it had been released from all restraint, as if paralyzed in the sac; then a little pressure seems to rouse it from this torpor, and it suddenly snaps away from our assisting grasp. In other cases we are compelled to follow it with the hand, and as it were to force it by a kneading act, (the necessity for which I do not comprehend,) to return within its natural abdominal confines. Here we are not to suppose, we have to contend with any of the various complicated forms of the disease. There is no mortification to embarrass; no adhesions to cause delay; no degenerations of structure about which question may arise The intestine is congested, but in every other respect it is sound and favourable for replacement. During these operations but little blood is lost. None enters the sac, none lies on the intestine, so that abstraction being seldom demanded, we can at once proceed with the business of reduction. Our efforts should be gentle, and are to be first directed to those parts which lie nearest to the neck of the hernia. Each part to which the finger is succesively applied, must be passed into the abdomen, before the arrangement is further attempted. It is said, whatever pressure we use should be directed to the mesentery. I see no other objection to the precept, than that adherence to the rule is not uncommonly impracticable, from the position which the intestine holds. In my own practice, I have not attended to it. I am in the habit of acting as convenience suggests. I press the intestine, and do so with as much delicacy as circumstances will allow. If it is distended with flatus, I endeavour, with caution to reduce its volume. If there are accumulated contents to a certain amount, and of a certain liquidity, I strive to get rid of these. To further these objects, moderate pressure of no long duration is sufficient. In hernia, containing both intestine and omentum, the general inspection prohibits the reduction of the former until the reduction of the latter be effected. To such an injunction I have for a long time refused obedience. I speak from experience, and I can assure you from practice, that a perfectly opposite one is one of advantage and convenience. You may try the omentum, and you will no doubt succeed in effecting its return. The omentum is a sluggish organ, it has no retractile power, part after part must be kneaded through the aperture, and finally, I am persuaded, replacement is accomplished, only in consequence of the force we directly use, acting indirectly upon the contents of the intestine. These find their way into the abdomen, but we are so engaged in the one proceeding we omit to remark events, which facilitate its execution. I say, therefore, reduce the intestine in the first instance. Afterwards you can easily deal with the omentum.

Whatever be the contents, you must be sure you have placed them in the cavity of the abdomen. Certainty on this important point is readily within reach; and we are assured it is wise, when the finger introduced through the yielding opening can be freely rotated within its abdominal boundary. The motive for such a motion may not now be apparent; you will yet understand its value, and subscribe to the necessity for the rule it must ever dictate.

So far the ends for which the operation was undertaken, we can imagine to be obtained. We are next to endeavour to re-unite the wound according to those principles in which I have instructed you. Strongly adhesive straps, the interrupted suture, compress, and bandage will be required. By these means we desire to preserve opposition, that union by the first intention may take place. In this, however, we are constantly disappointed. The parts are easily disturbed; they suffer in the act of coughing, and in every movement of the body. When introducing the needle and ligature, the sac must be divided, and you must be careful to provide against injury of its contents, should they remain in or have returned to its cavity. The wound being adjusted, the patient is conveyed to bed without any exertion on his part. He is to be laid in a position not likely to demand a change, and easy to the parts concerned in the operation. You will forbid every effort, and when engaged in such as are indispensable, you will desire his hand to be laid over the wound, and to be maintained there with a moderate pressure until the parts are again at rest.

An Abstract of Original Views on the Functions and Diseases of the Intestinal Canal, with an Examination of such Objections as have been urged against them; and a further Report of their successful practical Application. By James O'Beirne, M.D., Surgeon Extraordinary to the King, one of the Surgeons to the Richmond Surgical Hospital, Dublin.—(Read at the Medical Section of the British Association, Aug. 14, 1835.)

(Continued from vol. ii. p. 101.)

DYSENTERY.

Case 1st.—Catherine Mac Enally, aged 40, was admitted into the Richmond Surgical Hospital, on the 13th of February, 1834. Affected for two months—greatly emaciated—countenance sunk and desponding—considerable tenderness of abdomen—constant termina and tenesmus—sanguineo—mucous stools—great thirst—pulse hard, small, and 86—tube introduced, and an enema, composed of two ounces of castor oil, two of olive oil, and one quart of moderately warm water thrown up—bowels freely moved, and a considerable quantity of feces, mixed with blood and mucus, discharged. Instantaneous and perfect relief, or rather removal of all her complaints. The introduction of the tube and the use of the enema ordered to be repeated twice daily. This order accidentally omitted to be complied with during nearly the whole of the two following days, yet no return of her symptoms for 36 hours; but after that period, she began to suffer severely. The tube and enema again employed—succeeded by perfect relief, as before—the same treatment. with the exception of merely throwing up a quart of warm water, continued for two days—no return of symptoms—perfectly well she says—detained in hospital for three or four days—still no return of her complaint—discharged quite recovered on the 24th of the same month.

Case 2nd.—Maria Doyle, an infant only 10 months old, teething, attacked in October, 1834, with incessant passing of mucus streaked with blood, constant screaming and writhing—tenderness of abdomen, loss of sleep, occasional vomiting, and dislike to the breast milk—tube introduced, and an enema, composed of ʒiij. of castor oil, and five ounces of warm water thrown up—bowels moved soon after, and feculent matter, with mucus streaked by blood, discharged—immediate and very striking relief—soon fell into a souud sleep—ceased to cry, writhe, or pass any thing from the bowels—Warm water thrown up by the tube once daily for two or three days—and perfectly recovered at the end of that time.

Case 3rd.—Miss E. S., aged 22, attacked, from exposure to cold and errors in diet, on the 21st of October, 1834, with all the symptoms of dysentery. Tube introduced, and the enema of castor oil thrown up. Immediate and decided relief—perfectly well on the morning of the 24th that is, on the third day from the attack.

Case 4th.—James Doyle, four years old, of No. 10, Moore-street, attacked, on the the 2nd of May, 1833, with all the symptoms of acute dysentery—treated in the same way, with the same results—and perfectly well on the 4th, that is, on the 2nd day from the attack.

REMARKS.

The superiority of this treatment over any other that has ever been employed in dysentery, is very remarkable, and consists, first, in affording instant, decided, and general relief; secondly, in effecting a complete and permanent cure of the disease in the short space of two or three days; thirdly, in neither impairing the health, nor diminishing the strength, of the patient; fourthly, in the simplicity of the means employed. These are invaluable advantages in the treatment of dysenteric patients of all ranks and callings in life, and of every kind and degree of constitution, from the strongest to the weakest. Such a mode of treatment, also promises, for I cannot speak from experience, to prove a most useful adjuvant in the chronic form of the malady; and seems to be peculiarly adapted to cases combined with typhus fever. But it almost becomes of national importance, when we reflect, that the disease in which it is so singularly efficacious has often suddenly reduced regiments to skeletons, and nearly unmanned ships, at the most critical periods of naval and military operations; and hence is justly described as the scourge of fleets and armies.

As yet, I cannot refer to the experience of even one practitioner in favour of this plan of treating the disease, for the prejudices against it are both general and strong. The nature of these prejudices, as far as I have been enabled to learn, is this: In the first place, it is considered unsafe to introduce a tube into an intestine, the lining membrane of which is inflamed; secondly, it is deemed im-

possible that a disease like this, commencing with fever, and inflammatory in its nature, can be cured by such means, or by any but those directed against other inflammatory affections. I am fully prepared, therefore, to see the plan condemned without investigation or trial, and myself accused of grossly exaggerating its merits; but I am not more certain of my own existence, than I am of its ultimate triumph. In the mean time, I can only assert, that the introduction of the tube is in no way unsafe, and that, although it is more painful than in other cases, this disadvantage is more than amply compensated by the advantages derived; and that it is only necessary to give the practice a fair trial, in order to be agreeably surprised by its success. I am willing to stake my character upon these assertions.

For the principles upon which the treatment is founded, I must refer to my work.

Strangulated Hernia.

Case 1st.—Mrs Catherine Hart, of No. 14, Chatham-street, aged 47,—was attacked on the 6th of January, 1834, with severe vomiting—great pain and distention of the abdomen—pain in the groin—thirst, sinking of the countenance—and her pulse was 120, and small. In this state, she was seen by Dr. Ireland, who discovered that she laboured under strangulated femoral hernia, of small size, intestinal, and on the right side. She was soon after seen by Mr. Hayden. These gentlemen employed the taxis frequently—two tobacco injections were administered by the common bag and pipe, but without success—and preparations were made for operating. They now requested my assistance; and on my arrival, I found, in addition to an aggravated state of all the symptoms, that the face and extremities were cold, the pulse exceedingly feeble and small, and an alarming degree of general prostration. I now tried several times to reduce the hernial tumour, but all my efforts failed; and at once I agreed with Dr. Ireland and Mr. Hayden, that the operation should be immediately performed, if the introduction of the tube did not succeed. Accordingly, with their free permission, I introduced the tube. When it reached the height of about 10 inches, some flatus began, and continued, to escape—the tumour became very sensibly diminished in size, and less tense. The taxis was now employed, and after using very slight pressure, the gut suddenly darted up into the abdomen; the patient instantly expressed general relief — the pulse became fuller and stronger—the countenance and general appearance remarkably improved, and every thing like nausea ceased. Ordered to lie on her back, with her knees drawn up—and to have an enema, and two pills of calomel and cathartic extract. This woman was quite well in two days after, and a truss was applied.

Case 2nd.—Samual Hodgens, aged 17, a sailor, admitted, on the 13th of June, 1834, into Jervis-street Hospital He had a small, oblique, inguinal hernia on the right side. It was very tense and painful to the touch. He could not bear the slightest pressure on the abdomen.—He reached frequently—had hiccup—vomitted up every thing he drank His countenance was anxious, pulse exceedingly quick and small, skin hot, tongue white and dry. The hernial tumour was so very painful and tense, that he could not bear even the slightest attempt to reduce it. The tube, therefore, was introduced, and an enema thrown up—the tumour became sensibly diminished in size and tension, and was eventually easily reduced—all alarming symptoms disappeared—and the man was discharged perfectly recovered.

Case 3rd.—James Berbeck, of Moore-street, aged 55, admitted on the 12th of October, 1834, into Jervis-street Hospital. On admission, he had a very large scrotal hernia, perfectly solid, and receiving no impulse from coughing and irreducible by the taxis. The same treatment was employed; and after the bowels discharged an enormous quantity of feces, the tumour diminished considerably in size, was easily reduced, and the man left the hospital free from all complaint, on the following day.

Case 4th.—John Lawless, of Fishamble Street, aged 26, admitted into Jervis-street Infirmary, the 28th of December, 1833. He had just received a wound of the abdomen, two inches long, and at the right side of the umbilicus. A portion of the intestine, with a little omentum, had protruded through the wound, and was quite hard, very painful to the touch, and of a pink colour. It could be easily passed into a space between the sheath of the rectus abdominis muscle and the peritoneum, but not into the cavity of the latter. In this case, the tube and enema, together with bleeding resorted to twice and freely, enabled the protruded gut to be returned, without en-

larging the wound. This man died from a wound of the stomach, about half an inch long, and situated about two inches from its pyloric extremity."

(*The three last cases are communicated by* Mr. CULLEN, M.R.C.S. *of London, and resident surgeon apothecary of Jervis-street Hospital.*)

REMARKS.

The foregoing cases, with three others which are reported in my work, present seven instances, in which this treatment obviated the necessity of an operation. But it is not always so successful, for it failed in the only other instances, four in number, in which I had opportunities of giving it a trial. It failed in two cases of intestinal femoral hernia, which seemed to promise success, but the cause of failure could not be discovered, for the operation when performed exhibited nothing unusual, and the patients recovered. In a third case, one of inguinal hernia, the patient was so unruly that he would not allow the tube to be passed to the height necessary, yet the hernia was reduced shortly after by the taxis, which had previously failed. In the fourth case, it also failed, but the cause of failure was ascertained to be an organized membranous band strangulating the descending colon. This last is the case of Mary Jones, which I have adduced in order to shew the situation which the sigmoid flexure, when empty, occupies in the living body. There are, also, several kinds of cases in which it cannot succeed, such as as those of epiplocele; those in which the sac forms the stricture; those in which the intestine adheres to the sac; those in which, as in old and debiltated persons, the cavity of the intestine is filled with solid feces; and those complicated with internal strangulation, produced by organized membraneous bands. In one of these cases, however—that in which the intestine adheres to the sac—although it cannot affect reduction, it may remove or relieve the symptoms of strangulation. But it is in the common, uncomplicated cases of enterocele and entero-epiplocele, that this treatment is productive of such valuable and striking results; particularly in those where the tenderness of the hernial tumour is such, that the patient will not allow it to be touched, or cannot bear any attempts at the taxis. Yet, as far as I know, no other practitioner has given it a trial in these or any other cases of strangulated hernia; and it is not easy to account for the neglect, for the introduction of the tube, or, if found necessary, the injection of an enema, causes little or no delay, does not interfere with the employment of other means, is perfectly safe, and may be tried immediately after reasonable attempts at reduction have failed.

For the principles upon which this treatment rests, I must refer to my work.

Tympanites.

Case 1st.—"Thomas F., Esq., late member for the county of L———, laboured under a disease of the liver, which eventually proved fatal. During his illness he became exposed to cold, and this imprudence was followed by great pain on pressure over the abdomen, extreme tympanitic distention, sense of great oppression, alarming prostration, cold extremities, and livid countenance. Bleeding, calomel, and turpentine injections were had recourse to; but nothing afforded relief until the tube was introduced, which caused a rapid and long-continued escape of gas, produced copious stools, and quickly dispersed all the alarming symptoms just mentioned. The gentleman lived for some months after this attack." (*Communicated by my distinguished colleague,* Mr. RICHARD CARMICHAEL.)

Case 2nd.—James Crosbie, aged 45, a servant, was crushed between a cart-wheel and a wall. Three of the lower ribs, on the right side, were broken near to their angles; and he was incapable of moving his lower limbs. His extremities were cold and paralysed. He could neither pass his urine, or void his stools. On being seen, three hours after the accident, in addition to these symptoms, his pulse was quick, his abdomen tympanitic, the powers of life were considerably depressed, nothing in the shape of either food or medicine rested on his stomach, and he expressed his conviction of the impossibility of his recovery. The treatment pursued in this case limited itself to bleeding, leeching, calomel, and cathartics. At first the patient was not relieved, but on the evening of the second day from the accident, a long flexible tube was introduced through the rectum into the colon, by which exit was given to a considerable quantity of flatus, and by then throwing up warm water, the intestines began to act, and the general symptoms were relieved. (*Communicated by* PROFESSOR MACNAMARA.)

Case 3rd.—In the *Medical Gazette* for

the 28th of March last, Dr. John Murray, Deputy Inspector-General of Hospitals at the Cape of Good Hope, relates a case of femoral aneurism, in which circumstances made it necessary to tie the artery within an inch of Poupart's ligament; and, after describing the operation, he makes the following statements and observations:—"The usual treatment," he says, "was pursued, and, in regard to the wound and aneurism, nothing worthy of notice occurred for nearly a fortnight. He suffered, however, dreadfully for some days after the operation, from flatus in the intestines, which he was unable to expel; indeed he complained of nothing but the agony which this occasioned him, and was constantly calling out that he was sure he would burst if not relieved. Purgatives, carminatives, absorbents, assafœtida, and anodynes, were exhibited, without effect; and at last I thought of Dr. O'Beirne's plan of introducing the tube of the stomach-pump up beyond the upper annulus of the rectum; and were it only for the information which the Doctor has given us, of this effectual remedy for the tympanitic state so frequently attendant upon operations about the abdomen, constituting a symptom both distressing and dangerous, I should consider his work on defecation as one of great value to suffering humanity. Upon the entrance of the tube into the colon, an immense volume of air rushed up through it, with instantaneous and perfect relief; and he was not troubled with any return of this complaint."

REMARKS.

The tympanitic state of the abdomen, which often attends the advanced stage of continued and typhus fevers, is always an unfavourable and embarrassing symptom; for it generally requires for its removal the use of medicines, which are too frequently contradicted by the actual state of the patient. It would be most desirable, therefore, to possess remedial means free from such defects; and I know none so free from them as the introduction of the tube. I must say, however, that I have not had opportunities of trying it, and that I do not know any one who has tried it in cases of this kind. But, with the exception of that form of the disease called tympanites abdominalis, in which the gas is contained in the cavity of the peritoneum, I cannot see any reason why it should not succeed, and succeed better than any other plan, in every case, no matter what disease it may attend, or from what cause it may proceed. In expressing this opinion, I am fully aware that Dr. Osborne, of this city, acting upon the proposal of Truka De Kr. Zowitz, has lately succeeded in pumping out the pent up gas, by means of a stomach pump apparatus, or one extremely like it. But the results of several attempts which I made at exhaustion, more than nine years ago, by a similar apparatus, as well as Dr. Osborne's own account, compel me to object to this mode of proceeding. In the first place, he states that it required "about an hour" to reduce the abdomen to "nearly the natural size." I am not surprised at this statement, for, in attempts of this kind, the force required in drawing up the piston is greater than can well be imagined by any one who has not tried this experiment. He states that he met with some "interruptions which were speedily overcome, either by shifting the place of the tube, or by injecting warm water to clear the holes from accidental stoppages." Neither am I surprised by this statement, for the suction thus produced causes the parietes of the colon to meet above the point of the tube, so as to form a sort of septum in front of its orifice. That such a septum is formed in this way is evident, first, from the force required to draw the gas into the syringe; secondly, from the necessity of shifting the tube and injecting water; and, lastly, from the fact that the introduction of the tube into the colon, without attaching to it a syringe, and without either shifting it here or there, or injecting water through it, is instantly followed by an explosion of gas, and rapid falling of the abdomen.

Before I conclude this paper, I find it necessary to offer some observations on stricture of the rectum; premising my peculiar views on the subject, will be found in my work in the *London Medical and Surgical Journal*, (Vol. 5, p. 9. *et seq.*) and in the *Lancet*, for 1833—34. (p. 712. *et seq.*)

Permanent, or organic stricture of the rectum, or that form of the disease in which the stricture of the intestine is more or less altered, was considered to be of rather frequent occurrence, until I made known the fact, that, after examining the Museums of the College of Physicians and Surgeons, and of three private schools, in this city, I could find but very few specimens of this form of the disease. I omitted to mention the number which I met with, but I may now state that they did not ex-

ceed four. In opposition to my statement on the matter, Mr. Salmon, of London, in the course of his controversy with me, asserted that he possessed "numerous morbid preparations" of the disease. Convinced, however, that he was somehow deceived, and that, if this form of the disease were really so frequent as it was reported, a proportional number of specimens of it should be found in the long-established, extensive, and valuable museums which I had examined, I took the liberty of doubting his assertions in this respect. To remove these doubts, Dr. Blundell, and Mr. Bransby Cooper, of London, examined and reported upon the preparations in Mr. Salmon's possession; but I afterwards analyzed these gentlemen's reports, and succeeded, I conceive, in showing that none of three specimens submitted to their inspection were examples of organic stricture. Since that time, however, the correctness of my statements has been fully established by the testimony of Professor Liston, and, subsequently, by that of Sir Benjamin Brodie, for these eminent gentlemen state in their lectures on this subject, that they have been enabled to find but very few specimens of organic stricture of the rectum. But the statements of the former are so conclusive and explicit on the matter, that I shall insert them here.—"I can give you, says Professor Liston, no stronger evidence of the rarity of stricture in the rectum, unconnected with any specific disease, such as scirrhus or venereal affection, than the fact, that in all the pathological museums taken together, in this vast metropolis, you will find but very few specimens. The same holds good in regard to collections in other countries." (*Lancet* for 1834–35. p. 709.) The very great infrequency of this form of the disease may, therefore, be considered as established; and the fear of encountering it need not any longer prevent practitioners from using the degree of force sometimes required in introducing the tube.

I have had no opportunity of trying the plan which I proposed for the treatment of this form of the disease, and can add nothing to that usually employed.

Spasmodic stricture, or that which is produced by spasmodic action of a few or more fibres of the muscular coats of the intestine, must, according to my views, be a very common affection. In point of fact, when we are using the tube in cases of colic, iliac-passion, and other diseases attended with constipation, we are actually treating a spasmodic stricture of the bowel. Yet we see that some eminent men doubt, and that others ridicule, the existence of this species of the disease, although it is obvious that they might as well doubt or deny the existence of a similar species of stricture in the urethra, for a moment's consideration will shew that the evidence is just as strong, in the one case as in the other. It is to be hoped, however, that all this doubt and ridicule will cease, in proportion as the persons in question calmly review and reflect upon the functions of the rectum—the constant exposure of its upper orifice to both chemical and mechanical irritation—the peculiar manner in which it is connected with all the great nervous centres—and the direct influence which irritative states of all these centres necessarily exert upon this intestine.

With respect to the treatment of this species of stricture, there is but one useful or original fact which I have to communicate. It is this. The decided relief afforded to the patient, and the great assistance given to the surgeon, by pustulation of the lumbar and sacral portions of the spine with tartar-emetic ointment, whether there be pain felt or not felt in those regions. But if pain be complained of in a higher part of the spinal column, or that any of the cervical or dorsal vertebræ are found more tender on pressure than others, it will be necessary to also pustulate those parts. It would not be difficult to shew why this practice should be adopted in cases where pain is not felt, as well as in those where it is felt. But such an explanation will be unnecessary to many, and would involve me in a lengthened theoretical discussion which I am anxious to avoid. I can only assert that, in some cases of this kind, the practice has of itself almost effected a cure, and rendered the introduction of the tube less painful to the patient, and less difficult to the surgeon.

EFFECTS OF THE NEW DISPENSARY ACT IN IRELAND.

By the 81st clause of the new Irish grand jury act, the salaries of physicians (in fifty-six out of sixty-four dispensaries at present established in the county of Cork) will be reduced to one-half.

LECTURES ON OBSTETRICY,

AND

DISEASES OF WOMEN AND CHILDREN,

(Illustrated with numerous Plates.)

Delivered at the Medical School, Westminster Dispensary, Gerard-street, Soho-square, Session 1836.

By DR. RYAN.

LECTURE XXXV.

Reproduction of the Human Species.

I have now considered marriage in a religious, moral, physical, civil, and legal point of view, on account of its vast influence on public health, morals, the procreation of vigorous offspring, and their physical education; and lastly, as the origin, source, and regeneration of society. I have introduced this subject in imitation of the example of Dr. Dewees, Professor of Midwifery in the University of Philadelphia;* and I mention this fact, to shew that notwithstanding the unjustifiable remarks of some ill-informed critics, it was a legitimate one for consideration.

I flatter myself with the conviction, that the foregoing account of the generation of plants and animals, and the remarks on marriage, are calculated to instruct the junior and rising part of the profession, and through them to benefit society at large. An epitome of a universal code of reproduction of organised beings, from the humble plant to man himself, is as interesting and legitimate a study for the cultivators of medicine, as any other portion of human or comparative physiology. I also venture to maintain the opinion, that it will tend to correct many errors and vices most prejudicial to the interests of families, and to future generations. In fine, the diffusion of correct opinions on a function which was never perhaps so abused as in this licentious and profligate age, cannot fail to be productive of some portion of good, by exposing the fallacy of popular errors with respect to it.

All researches on the reproduction of plants and animals, from the lowest to the highest, in ancient and modern times, were made with a view of explaining the generation of the human species. But all have hitherto failed to explain the mystery of reproduction of man—the transmission of the vital and immortal principles from parents to offspring; and after the investigations of ages, the resort must be to the Omnipotent Creator of all things. Man is still ignorant of how life begins or ceases. It is all mystery to him. He cannot reason from the analogy afforded by the vegetable and animal kingdoms. This is the most unsatisfactory. As in plants and animals, the propagation of the human species is confided to two *sexes*, male and female. Both are endowed, for this object, with particular organs called *sexual*, whose united action and reciprocal *contact*, are indispensable to the formation of the new being.

Sexual approach or contact reunites the constituent parts of the future being. These elements are the spermatic fluid of the male, and the ovum or germ of the female. The process by which these elements are united is the same, as already described, in other mammiferous animals.

Man and woman, like other animals, do not enjoy the faculty of procreation at all periods of life: it is only at that age when the body has acquired complete development, and this is from the puberty or sensbility to old age. The phenomena of this age have been detailed in the description of puberty, and the proper age for marriage. The sexual organs having acquired perfect development, they are excited by the secretion of the seminal fluid in man, and the development or perhaps secretion of the germ or egg in the ovary of woman; and this excitement leads to sexual union, by which the elements of both sexes are united, and the new being is formed. Of this I shall speak more particulaly hereafter. The reciprocal action of the male and female fluids, does not produce at first, but an animated point, possessing all the vitality of a plant. It gradually developes in a manner which will be fully described when speaking of ovology, and it is only after the lapse of nine months, that the new being is perfect. The period of fœtal development is termed pregnancy or utero-gestation. When this has arrived, the new being is born, and this function is called labour, delivery, or parturition. The new being, after having passed the portal of life, is extremely feeble, and would expire in a few hours or days, unless for the many cares which are bestowed upon it. The chief of these are clothing, aliment, and repose; and nature endows the mother with milk—lactation. Many other cares are required for the physical and moral education of the infant, which will be fully described hereafter.

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* *Treatise on the Physical and Medical Treatment of Infants and Children.* Philadelphia, 1830.

Arrived at a certain age, both man and woman lose the mysterious and brilliant power of procreating new beings, the age of decline, the critical age or turn of life. There are, however, numerous causes of impotence and sterility, which render reproduction impossible.

After this summary review of the series of functions peculiar to reproduction, we must perceive that to treat of generation it would be necessary to describe, 1. The sexual organs. 2. Their development at puberty. 3. The functions of these organs by which the new being is formed (coition, copulation.) 4. Of the action of the male and female fluids on each other, or the mechanism of impregnation and conception. 5. The development of the germ in the womb; gestation, or pregnancy. 6. The expulsion of the infant from the womb, parturition, delivery, confinement, accouchment. 7. The function of lactation or suckling. 8. The physical and moral education of infants. And 9. The loss of the faculty of procreation.

Such are the subjects which require to be described in elucidating human generation. These require to be briefly and concisely noticed; but a full description of them is given in the works on anatomy. All the organs or parts which are subservient to generation are denominated genital or generative organs. They are called secret or private parts, on account of the mystery which causes modesty and shame with regard to them. They are also called *parts* as if to express their superexcellence, as, without these generation could not continue, and the human species would become extinct. The unthinking part of mankind consider allusions to these organs as indelicate; but the practitioners of the healing art must consider their structure and functions. The sexual organs of man and woman are wonderfully adapted to each other, and have a perfect power of acting on each other. In one there is a firm organ in the state of erection; and in the other a canal to receive it. Nature sacrifices every thing to reproduction: it is for this that we enjoy all strength, vigour, and beauty; so as to excite us to contribute to the procreation of the species, with which such exquisite pleasure is associated; and it is for this that we experience so many sweet illusions in the brilliant season of our amours; and that we give way to others, when our reproductive powers have failed. In a word, nature always regards the species; and never the individuals.

The delightful sensations experienced by animals in the act of reproduction, causes them to perform it instinctively. But nobler sentiments preside over the conjugal union of our species: two souls sympathise for each other, and see in common the wisdom of procreating offspring like themselves; two hearts which console each other in the troubles of life, and centuple their pleasures by the most intimate union; the delights of a conversation full of tenderness; the affectionate cares bestowed on each other during illness; an association of talents, qualities, riches, honours, and paternal and maternal love; such are the precious advantages which mankind derive from conjugal union. But whatever may be the superiority of man over inferior animals, in the respect to generation, we cannot conceal from ourselves, that, like the brutes, we are seldom influenced by any other motive in our unions than by sexual pleasure only. It is useless for us to deny that the majority of marriages which are apparently based on real love, are almost always the result of our servile and involuntary obedience to the imperious voice of our sexual organs. Every thing that presents to our minds the idea of vigour, of a fine figure, and sufficient ardour, always influences us unconsciously. Woman can never deny that she has a particular predilection for a fine figure, a noble gait and manner, a broad chest, the head elevated and furnished with a luxuriant growth of hair, the eyes full of fire, the manners amiable, and the gallantry polite. In the same manner, man is always desirous to meet in her whom he prefers for his wife, superior mental and corporeal endowments, a fine graceful figure, good eyes, and general development. Others prefer a woman of high moral worth to all other considerations; some allow wealth, titles, and evanescent temporal insignificancies to influence their choice; and conjugal unions based on such motives are generally both unfertile and unhappy. It will be found upon reflection, that the superior qualities of mind, and physical beauty are the concomitants of great genital vigour. Numerous proofs of this position are adduced in the observations on the morbid and hygrenic effects of the use and abuse of the genital function.

I have already described the genital organs peculiar to woman in the gynæcotomical part of this course; and shall now, very briefly, notice those of man, which are equally numerous and more important

in the regeneration of the species, and compare the identity of structure and functions of both.

Genital organs of man.—The part which man takes in reproduction consists in the preparation and transmission of a fluid capable of impregnating the other sex. The testicles prepare the prolific fluid, and a canal from each (vas deferens) conveys it through each groin into the abdomen to two reservoirs or receptacles (vesiculæ seminales) where its thinner parts are absorbed, and then it becomes more elaborated—to other canals, or ducts, run from the vesiculæ seminales to the urethra, or urinary passage, into which they transmit the semen or prolific fluid, and these are called ejaculatory ducts; and the other organs, which are destined to transmit it to the womb, are the urethra and virile member or penis. A brief description of each of these organs is necessary so as to enable us to comprehend their functions or uses.

1. *Testicles.*—The testicles are two ovoid glands covered by common integuments called scrotum or purse; their use or function after puberty, is to separate or secrete from the blood sent to them by the spermatic arteries, the semen or prolific fluid. We find in their substance a vast number of vessels twisted on each other but continuations of the same tube, called semeniferous canals, and these terminate in one tube or canal (vas deferens). Thus the sources of the seminal fluid are the testicles, and these are so influential on the strength of man, that if they are removed by castration, or destroyed by scirrhus or other diseases, he loses the power of engendering, becomes much weaker and more effeminate than when they performed their functions. These organs are two in number, but one is sufficient for procreation. They vary in size in different individuals, and one is generally larger than the other. They are placed under the kidneys in the fœtus, and descend from the abdomen to their usual situation in most persons. Moreover, there are some individuals in whom they remain in the abdomen during life, but such persons are as prolific, and, indeed, are said to be more vigorous than those who have them externally. I have been consulted by individuals, who had one testicle externally, and the other internally, as to the propriety of forming a matrimonial union, and I have always advised them to do so, and they invariably have had children.

One gentleman of fine development, who had had but one testicle, came from the north of England to consult me as to the propriety of forming a matrimonial engagement with a lady of very large fortune. I advised him to marry, as I assured him that one organ would be sufficient for procreation, and in his case the other was in the abdomen. John Hunter, Sir A. Cooper, and a host of other celebrated writers, have mentioned instances in which a man with one testicle had procreated infants of both sexes. Even a man who lost both by castration might procreate one infant, provided the seminal vessels contained sufficient semen at the time of the operation. The celebrated M. Boyer told a patient of his who was in this condition, that he certainly might be the father of an infant of which his wife was then pregnant, but he never could engender another. This is detailed in my *Manual of Medical Jurisprudence.*

It was supposed by the ancients that the semen or seed descended from the brain and all parts of the body; and that its frequent effusion debilitated all parts. In favour of this doctrine, it was urged that the infant resembled its parents not only in the whole body, but in the different parts—as the face, eyes, hands, feet, &c., as well as in disposition and mental powers; but a more modern physiology has indubitably proved that the blood sent through the spermatic arteries to each testicle, enables it to secrete its peculiar fluid, just as bile is secreted by the liver, urine by the kidney, &c. It is proved beyond the probability of question, that as the spermatic arteries are divided or tied with a ligature, or if the testicles are removed, no more semen can be formed; and therefore this fluid does not descend from the brain or other parts of the body.

The *vasa deferentia, deferent* or *conveying canals.*—The semeniferous canals of the testicles terminate in a tube on each side, which ascends into the groins, passes through the abdominal ring into the abdomen, and enters the seminal vesicles on each side at the lower surface of the bladder. These tubes are called deferen, from the Latin word deferre to carry.

3. The *vesiculæ seminales,* or *seminal vesicles or reservoirs.*—These consist of two small membraneous sacs or bladders, which receive the seminal fluid from the deferent canals. The prolific fluid accumulates in these receptacles, and causes all amorous excitation. It is from this

part of the sexual apparatus of the male, that the venereal irritation is communicated to the virile member, and to all other parts of the economy, in consequence of the nervous connexion between all parts of the body and the sexual organs; which induces the most intimate sympathy between all. When the seminal fluid is allowed to accumulate in the seminal vesicles for ten or more days, until it excites amorous impulse and erection of the male organ, it is best fitted for reproduction. In proof of this it may be observed, that those who indulge in the abuse of sexual pleasure, have the seminal fluid thin, watery; it has little effect, on the ovary, and is almost always unfit for the formation of a new being. But unless great debility or emaciation is caused by abuse of sexual intercourse, too frequently repeated or too long continued, a repose for a few days will render the spermatic fluid sufficiently elaborated for procreation.

4. *Ejaculatory canals, or ducts.*—These are two in number, which run from the vesiculæ seminales to the urethra or urinary passage, to which they convey the seminal fluid.

5. The *membrum virile-penis.*—This organ is from two to four inches in length in its ordinary or collapsed state, and from six to eight or nine inches when erected by amorous impulse? It contains the urethra. The introduction of this organ into the vagina is sooner or later, succeeded by an energetic or almost convulsive action of the ejaculatory muscles, which compress the seminal vesicles, and force the semen through the ejaculatory canals into the urethra, from which it is propelled with more or less force into the vagina, and according to some physiologists into or against the orifice of the womb.

The abundance and force of the seminal emission, or ejaculation, are most favourable to conception; and the best means of attaining these advantages so necessary to the propagation of sound and vigorous infants, are not to use sexual pleasure until the body has acquired its full strength, which is from the twenty first to the thirty-fifth year for males; and from the fifteenth to the twenty-fifth in females; to enjoy it with reserve at all periods of life, to abstain from it, when the age is too young or too advanced, and in all cases when the constitution is feeble or delicate, or when the individual labours under acute or chronic diseases, more especially when painful and debelitating. Haller observes, the greatest number of animals are provided with a projecting part which characterises the male. Quadrupeds in general have it as well as man; it is small and less sensitive in birds. It is developed in the larger ones, as the ostrich, casowary, the swan, &c.

There are two or sometimes four in serpents, each being divided into two branches. Warm blooded fishes, as the whale, dolphin &c., have a penis as well as quadrupeds. We see it perfect in the swordfish, salmon, &c. Insects are also provided, even the smallest, such as the hand-worm and flea. In the class of worms, snails, round-worms, leeches, and many other species, we distinctly see one or two.

The characteristic sign of the male in man is the penis, and glans or summit. The penis is not tense (erected or firm) at all times, because man is destined for numerous duties incompatible with erection and firmness of the penis. He ought however to be able to acquire an erection with facility, without which generation becomes impossible. Pleasure, the persuasive voice of nature, does not arise without erection; without this the fecundating fluid cannot be conveyed to that only organ which satisfies the end of that wisdom which directs all things.

The erection of the male organ is effected by an accumulation of blood in the erectile and spongy parts of the body of the organ. If we cut the generative organ of animals at the very moment it is about to perform its function, we find it full of blood. We can imitate erection in the dead body by filling the spongy or cavernous cells of the penis with a liquid, or by injecting them.

It is necessary to fill those cells that the blood should be quickly conveyed to them by the arteries of the penis, and that it should return with less facility by the veins.

The remote causes of erection may be generally reduced to stimulants or excitants. The most natural is an abundance of the seminal fluid. This cause is obvious in birds, and it is not obscure even in man himself.

Want is the great law of nature; the accumulated seminal fluid, disposed to acquit its destination, excites the organ by which it can fulfil the views of nature. The too frequent use of love weakens this fluid; it removes at the same time the principal cause of erection. The fluid becomes unprolific, and cannot cause impregnation.

The imagination, the remembrance of pleasure, every association of ideas that can recal charms, will powerfully excite erection. It is this accumulation that renders man impertinent, impudent, and forward, both in polished society, in the ball-room, on the high way, as well as in other situations in life. It is this that renders it unsafe for any well-looking woman to go alone into the streets of any town or city, without being insulted by the amorous of the other sex. The odour of the genital organs of the female of the same genera, powerfully excites certain animals; and every irritation of the genital parts produces the same effect. Friction of the penis, irritation of the urine retained during sleep, the presence of a stimulating matter in the urethra (a stone, the passage of a bougie, catheter or injection), friction of the adjacent parts, aphrodisiac medicines, commencement of ulcers in the mucous membrane of the urethra or rectum, stimulating clysters, &c., excite erection.

The commencement of gonorrhœa, stricture, disease of the neck of the bladder, of the prostate gland, the numerous diseases of the bladder, ureters, kidneys; and, in many persons, of the head, chest, abdomen, and skin, will produce the same effect. The collection of flatulence in the rectum, of urine in the bladder towards morning, presses on the vesiculæ seminales, excites amorous desire, which is increased by the heat of a warm bed, and by the pressure of the bed clothes on the genital organs, if the individual repose on the back; and these causes not only excite a powerful erection, but lascivious dreams, and sometimes seminal emissions, more especially when the seminal vesicles are distended with semen. These facts lead physicians to advise those who suffer from frequent nocturnal emissions, to lead an active life, avoid reflecting on amorous subjects, lie on a hard bed on either side, but not on the back, and to abstain from ardent liquors, high seasoned and flatulent aliments, and other provocatives of amorous impulse.

Every violent convulsion of the nervous system produces erection, and even emission, as epilepsy, the action of different poisons, opium, &c. It appears that all irritating causes act in the same manner on the different parts of the body. The blood is determined with force to the irritated part, it swells, becomes red and hot, the sensibility is augmented to a high degree. The same phenomena are observed in erection of the penis. It is not easy to explain this local power of the nerves over the arteries, but this is a fact which cannot be questioned.

After a certain age the vivacity of individuals is enfeebled, the same stimulating causes do not excite erection, or they produce it very feebly. When the irritation of the nerves ceases, another idea displaces voluptuousness, and the organs assume their ordinary collapsed state. Erection is not always voluntary as the force of the will, which can neither produce it immediately, nor prevent it. It is one of those movements which result from the mechanism of the animal body, excited by sufficient causes,

It is not a voluntary action, as it remains for a considerable time without causing any accident, though some imagine it induces debility, which is caused by mental depression; it does not take away the strength, it is the result of perfect health; but it does not accomplish the designs of nature. It is the emission of the fecundating fluid which effects impregnation, and this does not usually take place except by violent efforts. Plazzoni, in his work, De Partibus Generationis, gives the following description of erection:—

Nam scopus à natura propositus in pene est seminis in uterum injectio, quæ injectio fieri non potest, nisi prius semen moveatur, nec moveri potest, nisi partes per affricationem incalescant, nec affricari et incalescere potest membrum, nisi in vaginam intrudatur, at infigi in rimam muliebrem non potest, nisi erigatur et rigeat. Alii rursus eundem in vaginam muliebrem infigi, et per assiduum cursum et recursum partes fæmineas confricare videntes, illam confricationem penis potissimam actionem esse credide-runt. Alii denique alias excogitant opiniones.—*De Actione penis.*

(To be continued.)

CHARTER OF THE UNIVERSITY OF LONDON.

Copy of a Draught Charter of the London University.

"William IV., by the grace of God of the United Kingdom of Great Britain and Ireland King, defender of the faith: to all whom these presents shall come, greeting. Whereas we have deemed it to be the duty of our Royal office, for the advancement of religion and morality

and the promotion of useful knowledge, to hold forth to all classes and denominations of our faithful subjects, without any distinction whatsoever, an encouragement for pursuing a regular and liberal course of education; and considering that many persons do prosecute or complete their studies, both in the metropolis and in other parts of our United Kingdom, to whom it is expedient that there should be offered such facilities, and on whom it is just that there should be conferred such distinctions and rewards, as may incline them to persevere in these their laudable pursuits. Now, know ye, that for the purpose of ascertaining, by means of examinations, the persons who have acquired proficiency in literature, science, and art, by the pursuit of such course of education, and of rewarding them by academical degrees, as evidence of their respective attainments, and marks of honour proportioned thereunto, we do, by virtue of our prerogative royal, and of our especial grace, certain knowledge, and mere motion, by these presents for us, our heirs and successors, will, grant, declare, and constitute during our royal will and pleasure, and all the persons whom we may hereafter appoint to be Chancellor, Vice-Chancellor, or Fellows, as hereinafter mentioned, one body politic and corporate, by the name of the University of London, by which name such body politic shall have perpetual succession, and shall have a common seal, and shall by the same name sue and be sued, implead and be impleaded, and answer and be answered unto in every court of us, our heirs and successors. And we do hereby will and ordain that, by the same name, they and their successors shall be able and capable in law to take, purchase, and hold to them and their successors any goods, chattels, or personal property whatsoever, and shall also be able and capable in law, notwithstanding the statutes of mortmain, to take, purchase, and hold to them and their successors, not only all such lands, buildings, hereditaments, and possessions, as may be from time to time exclusively used and occupied for the immediate purposes of the said University, but also any other lands, buildings, hereditaments, and possessions whatsoever, situate within our United Kingdom of Great Britain and Ireland, not exceeding the annual value of 10,000*l.*; such annual value to be calculated and ascertained at the period of taking, purchasing, or acquiring the same; and that they and their successors shall be able and capable in law to grant, demise, alien, or otherwise dispose of all or any of the property, real or personal, belonging to the said university, and also to do all other matters incidental or appertaining to a body corporate. And we do hereby further will and ordain, that the said body politic and corporate shall consist of one Chancellor, one Vice-Chancellor, and such number of Fellows or members of the senate as we shall from time to time appoint under our sign manual; and that our trusty and well-beloved the aforesaid be the first chancellor the first vice chancellor, and the said be the first fellows and members of the senate thereof.

"That whenever a vacancy shall occur in the office of Chancellor of the said university, either by death, resignation, or otherwise, we will, under our sign manual, nominate a fit and proper person to be the Chancellor instead of the Chancellor occasioning such vacancy.

"That the office of Vice-Chancellor of the said University shall be an annual office, and the Vice-Chancellor hereinbefore named shall, at the expiration of one year from go out of office, and the said Fellows or members of the senate shall, at a meeting to be holden by them for that purpose, on same day within a month before the expiration of the said office of which due notice shall be given, elect one other fit and proper person to be the Vice-Chancellor of the said University, and so from time to time annually; or, in case of the death, resignation, or other avoidance of any such Vice-Chancellor before the expiration of his year of office, shall, at a meeting to be holden by them for that purpose as soon as conveniently may be, of which due notice shall be given, elect some other fit and proper person to be Vice-Chancellor for the remainder of the year, in which such death, resignation, or other avoidance shall happen; such person to be chosen from among themselves by the major part of the Fellows present at such meeting, and to be approved of by the Chancellor of the University for the time being.

"That we reserve to ourselves to be the visitor of the said University of London, with authority to do all those things which pertain to visitors as often as to us shall seem meet.

"That the Chancellor, Vice-Chancellor, and Fellows for the time being, shall have the entire management of and super-

intendence over the affairs, concerns, and property of the said University; and in all cases unprovided for by this our charter, it shall be lawful for the Chancellor, Vice-Chancellor, and Fellows, to act in such manner as shall appear to them best calculated to promote the purposes intended by the said University, and the said Chancellor, Vice-Chancellor, and Fellows, shall have full power from time to time to make, and also to alter any by-laws and regulations (so as the same be not repugnant to the laws of our realm, or to the general objects and provisions of this our charter) touching the examinations for degrees, and the granting of the same, and touching the mode and time of convening the meetings of the Chancellor, Vice-Chancellor, and Fellows, and in general touching all other matters whatsoever regarding the said University; and all such by-laws and regulations when reduced into writing, and after the common seal of the said University has been affixed thereto, shall be binding upon all persons members thereof, and all candidates for degrees to be conferred by the same, all such by-laws and regulations having been first submitted to one of our principal Secretaries of State, and, approved of and countersigned by him.

"That all questions which shall come before the Chancellor, Vice-Chancellor and Fellows, shall be decided by the majority of the members present, and the chairman at any such meeting shall have a vote, and in case of an equality of votes, a second or casting vote.

"That no question shall be decided at any meeting, unless the Chancellor, or Vice-Chancellor and five Fellows, or, in the absence of the Chancellor and Vice-Chancellor, unless six Fellows at the least shall be present at the time of such decision.

"That at every meeting of the said Chancellor, Vice-Chancellor, and Fellows, the Chancellor, or, in his absence, the Vice-Chancellor shall preside as chairman, or, in the absence of both, a chairman shall be chosen by the members present, or the major part.

"That the said Chancellor, Vice-Chancellor, and Fellows, for the time being, shall have full power from time to time to appoint, and, as they shall see occasion to remove all necessary examiners, officers, and servants of the said University.

"That once at least in every year the said Chancellor, Vice-Chancellor, and Fellows, shall cause to be held an examination of candidates for degrees, and on every such examination the candidates shall be examined either by examiners, appointed for the purpose from among the Fellows by the said Chancellor, Vice-Chancellor, and Fellows, or by other examiners so to be appointed; and that on every such examination the candidates shall be examined in as many branches of general knowledge as the said Chancellor, Vice-Chancellor, and Fellows, shall consider the most fitting subjects for such examination.

"And whereas it is expedient to extend the benefits of colleges and establishments already instituted, or which may be hereafter instituted, for the promotion of literature and science, whether incorporated or not incorporated, by connecting them for such purposes with the university created by this our royal charter. We do hereby further will and ordain that all persons shall be admitted as candidates for the respective degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, or Doctor of Laws, to be conferred by the said University of London, on presenting to the said Chancellor, Vice-Chancellor, and Fellows, a certificate from any of the institutions hereinafter mentioned, to the effect that such candidate has completed the course of instruction which the said Chancellor, Vice-Chancellor, and Fellows, by regulation in that behalf shall determine.

"That such certificates as aforesaid may be granted from our college called London University College, or from our college called King's College, or from such other institution, corporate or unincorporated, as now is or hereafter shall be established for the purposes of education, whether in the metropolis or elsewhere within our United Kingdom, and as we, under our sign manual, shall hereafter authorise to issue such certificates.

"And for the purpose of granting the degrees of Bachelor of Medicine, and Doctor of Medicine, and for the improvement of medical education in all its branches, as well in medicine as in surgery, midwifery, and pharmacy, we do hereby further will and ordain that the said Chancellor, Vice-Chancellor, and Fellows, shall from time to time report to one of our principal Secretaries of State what appear to them to be the medical institutions and schools, whether corporated or incorporated, in this our metropolis, or in other parts of our United Kingdom, from which, in the judgment

of the said Chancellor, Vice-Chancellor and Fellows, it may be fit and expedient to admit candidates for medical degrees, and on approval of such report by our said Secretary of State, shall admit all persons as candidates for the respective degrees of Bachelor of Medicine and Doctor of Medicine to be conferred by the said University, on presenting to the said Chancellor, Vice-Chancellor, and Fellows, a certificate from any such institution or school, to the effect that such candidate has completed the course of instruction which the said Chancellor, Vice-Chancellor, and Fellows, by regulation in that behalf shall determine; and it shall be lawful for the said Chancellor, Vice-Chancellor, and Fellows, from time to time, with the approval of one of our principal Secretaries of State, to vary, alter, and amend any such reports, by striking out any of the said institutions or schools included therein, or by adding others thereunto.

"That the said Chancellor, Vice-Chancellor, and Fellows, shall have power to confer the several degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Doctor of Laws, Bachelor of Medicine, Doctor of Medicine, and that such reasonable fees shall be charged for the degrees so conferred as the said Chancellor, Vice-Chancellor, and Fellows, with the approbation of the Commissioners of our Treasury, shall from time to time direct; and such fees shall be carried to one general fee-fund for the payment of the expenses of the said University, under the directions and regulations of the commissioners of our Treasury, to whom the accounts of income and expenditure of the said University shall once in every year be submitted, which accounts shall be subject to such examination and audit as the said commissioners may direct.

"That at the conclusion of every examination of the candidates, the examiners shall declare the name of every candidate whom they shall have deemed to be entitled to any of the said degrees, and the departments of knowledge in which his proficiency shall have been evinced, and also his proficiency in relation to that of other candidates, and he shall receive from the said Chancellor a certificate, under the seal of the said University of London, and signed by the said Chancellor, in which the particulars so declared shall be stated.

"Provided always, that all by-laws and regulations made from time to time touching the examinations of candidates and granting of degrees, shall be submitted for the consideration of one of our principal Secretaries of State, to be approved of by him.

"And, lastly, we do hereby for us, our heirs, and successors, grant and declare that these our letters patent, or the enrolment or exemplification thereof, shall be in and by all things valid and effectual in law, according to the true intent and meaning of the same, and shall be construed and adjudged in the most favourable and beneficial sense for the best advantage of the said University, as well as in all our courts as elsewhere, notwithstanding any non-recital, mis-recital, uncertainty, or imperfection, in these our letters patent. Witness," &c.

ST. THOMAS'S HOSPITAL.

A QUARTZ PEBBLE IMPACTED DURING EIGHT WEEKS IN THE LARYNX.

To the Editor of the Medical and Surgical Journal.

"Sir,

"As there are but few reported cases of foreign bodies passing into the larynx, and as it may be desirable to keep the public attention alive to the occasional occurrence of such accidents, I beg to forward the enclosed case, which has recently fallen under my care, together with a drawing, for insertion in your valuable periodical.

"I have the honour to be, Sir,

"Your humble servant,

"Henry Bullock, M.R.C.S.

"St. Thomas Hospital, Sept. 1836."

"May 21st, 1836.—Susan Williams, ætatis 6, was playing with pebbles in her mouth, when she was seized with a most violent convulsive cough, so that she became black in the face, and was nearly suffocated; the paroxysm continued half an hour, and then subsided. On recovering, she stated that she had swallowed a pebble, which had lodged in the throat. The throat was examined, and the œsophageal probang introduced, but without, however, discovering any extraneous body. The three or four following days the child merely complained of a sense of soreness in the throat, with nausea, which was accompanied by occasional slight paroxysms of cough, with a copious mucous expectoration; she was also hoarse, but had no pain or difficulty in deglutition. Aperients and an emetic were prescribed; she was not benefited,

and as she still persisted that the stone remained in the throat, was again (May 25th) very carefully examined, yet there did not appear to be any evidence of its existence either in the œsophagus or trachea. These circumstances, coupled with the fact that the child had not had hooping-cough, yet had for some time previously been in daily contact with children labouring under that disease, appeared to warrant the conclusion that no foreign body had passed either into the œsophagus or trachea, and that the cough was among the first symptoms of a severe form of pertussis. At the end of the fifth day she had marked symptoms of inflammation of the mucous membrane of the bronchia, namely, cough, generally occurring in paroxysms six or seven times a day, attended with a kind of hooping inspiration, and a copious expectoration of tenacious mucus; the hoarseness was likewise increased, while over the trachea and upper part of the chest; there was a loud mucous rattle, which was in some parts sonorous; the pulse was 100, and rather sharp, and there was slight heat of skin.

"May 27th.—

"Hirudines, vj. thoraci.; Antim. Tart. gr. ¼ Hyd. Subm. gr. i. 6ta. quaque hora.

"The folllowing day she was very much relieved, having scarcely coughed since the application of the leeches.

"June 2d.—Until this morning she has been doing well, but the cough has returned, with much uneasiness in the throat, and she still persists the stone remains there, yet she has no difficulty in deglutition, or pain when pressure is made upon the larynx or trachea; pulse 100. The leeches to be repeated, and the medicines continued.

"3rd.—Better in every respect. Empl. Canth. jugulo.

"11th.—The child has been progressively improving since the last report, and is considered so far convalescent, that the medicines may be omitted.

"20th.—Quite well, having regained her flesh and healthy appearance.

"July 6th.—She was attacked with symptoms of pneumoina, which it is unnecessary to detail, and for which she was actively treated by bleeding, blistering, calomel, and emetic tartar, but without success, so that she died on the 18th of July, or eight weeks from the supposed accident; but from the 20th June to the day of her death, there was no return of the convulsive cough, nor any uneasiness about the throat. On the day of her death, however, she again said she could still feel the stone, and in the same place as at first.

"*Examination nine hours after death.*—On laying open the larynx and trachea, a quartz pebble was exposed to view, lying partly in the cricoid cartilage, and partly in the trachea, of the size of a large horse-bean, of an irregular figure and smooth surface: it was retained in its situation by a layer of apparently organised lymph, of very considerable thickness. On removing the stone, the mucous membrane under the effused lymph was in a state of ulceration, and the calibre of the tube was so nearly obstructed by the presence of the stone and lymph, as to render it difficult to pass an ordinary sized probe downwards; the whole of the mucous membrane of the trachea was thickened, and its vessels congested.

"*Chest.*—In the cavity of the right pleura was upwards of a pint of turbid serum containing flakes of lymph. An adventitious membrane was also formed upon the pleura pulmonalis of the lower lobe of the right lung, while nearly the whole of the substance of the right, and of the lower part of the left lung, were much diseased, and in the several conditions of engorgement, hepatization, and of purulent infiltration; the vessels of the bronchial membrance were turgid, and the tubes loaded with a muco-purulent matter; the bronchial glands were also enlarged and black, and in various parts in a state of suppuration.

The preparation from which this sketch was taken, I have since presented to the Museum of St. Thomas's Hospital."

BOOKS FOR REVIEW.

The Cyclopædia of Anatomy and Physiology. Edited by R. B. Todd, M.D. Part viii. Sept. Sherwood and Co.

The Report of a Committee on the New Poor Law Act appointed by the Provincial Medical and Surgical Association. Read at the Anniversary Meeting at Manchester, July, 1836. Sherwood and Co.

Facts and Cases in Obstetric Medicine, with Observations on some of the most important Diseases incidental to Women. By J. T. Ingleby, Lecturer on Midwifery at the Royal School of Medicine, Birmingham. Longman and Co.

ROYAL

THE

London Medical and Surgical Journal.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE VIII.

Treatment of Strangulated Hernia continued.

I have asserted that a person with an unrelieved strangulated hernia must necessarily perish. Now, the strangulation is removed, yet you are to understand it does not necessarily follow that life shall be preserved. The chances of recovery are increased; but all danger is far from being at an end. Inflammation may already have extended to the cavity of the abdomen, or it may invade that region in consequence of the injury which the protruded organ may have sustained. Inflammation is the danger to be apprehended, the disease against which we are to provide, and with which we have so frequently to contend. The means preventive and curative, are comprehended by the term antiphlogistic. You might imagine that in these cases those agents are to be at once set to work. But this is a mistake into which young persons are prone to fall unless they are duly advised. The pain attendant on a slow operation, and terror, its inseparable accompaniment, produce a degree of depression and debility from which patients do not recover for some short period. This period should be allowed to elapse without any active treatment. When suffering has been much, and exhaustion is evident, a moderate anodyne is admissible, and its effects should not be disturbed for a few hours, say four or six, by any impertinent interference. If tranquillity has been induced, if sleep has been enjoyed, if vomiting and hiccup has ceased, if there is no particular distress—but, above all, if there have been alvine discharges, and these such as might be expected to descend from the superior part of the canal, we may reasonably conclude that matters wear a favourable aspect. These are events we await with deep anxiety. Whenever they occur we have little more to do than to look on. The lancet is unnecessary, and we must learn to spare the stomach the annoyance it must receive from the obtrusive prescriber. If thirst be urgent, it is most readily and most gratefully appeased by small quantities of the coldest water which can be procured. But on our return at the expiration of the period now mentioned, should singultus be present, thirst be distressing, the fluids taken for its relief vomited—should an alvine dejection not have taken place while the abdomen is both tumid and painful, we may be assured that inflammatory action is in progress. The loss of twenty, thirty, or forty ounces of blood, may now be demanded. There is no time to trifle: the patient lives or dies by our decisive promptness. Blood must be largely taken according to circumstances, which judgment alone can regulate. One bleeding in a proper amount, is worth thrice the same quantity removed by successive venesections. When this remedy is carried to a sufficient extent, the bowels frequently become relaxed, and more is often in this way effected than could be derived from any aperient. If this desirable consequence is to follow, it arrives quickly. If it be delayed, the next question is, as to the next proceeding. Discharges from the bowels are looked on by most practitioners as essential to recovery. Their conduct is influenced by their conviction; purgatives, varied in their kind and combination, are administered until the store

being consumed, invention is at fault, or their frequent rejection warns off the hand which offers a repetition. I must confess I doubt the propriety of the adopted rule; and it is a principle with me to desist whenever I feel, I hesitate. The inflammation we treat here, has a topical cause which we understand. There is a mechanical injury, and, consequntly, the part which has suffered should be allowed repose. Medicines either excite, or they do not excite the peristaltic action of the intestines, usually so called, or rather of that special point from which the inflammatory affection has extensively radiated. In the first place, action is induced in a structure already irritated; and, in the next place, accumulation is produced in a recipient muscular canal, which can no longer deliver itself of what its morbid yieldingness has prepared it to receive. In both cases, the hollow intestine having been the part protruded, purgatives appear to me to be remedies which it is much less proper to prescribe than to omit. From this reasoning I have long been induced to avoid aperients, and I now never administer them until I am assured that inflammation has been subdued by sanguineous depletion, or until a sufficient period has elapsed to make it probable that it will not take place. We are to remember the easy excitability of the stomach; and, of course, where such remedies appear necessary, you will pay due regard to my former instructions. An enema of senna and salts, or of tepid water with common salt or any of the usual ingredients which every house supplies, will answer all purposes. Now, you must not deceive yourselves with the notion, that the tubes with which the modern contrived apparatus is furnished, can be passed to the height to which their length might induce you to believe. Arrogancy is always offensive, and therefore I would not willingly expose myself to the charge of presumptuousness, which I so constantly find occasion to depreciate. And yet I cannot avoid a positive declaration, that the introduction of these tubes to the extent to which they are said to be passed, is a matter of utter impossibility.

An excellent man, a surgeon, a friend of mine, but no anatomist, affirmed in opposition to my doubts, "By Jupiter, sir, I have passed the instrument to an arm's length." Now, I asseverate with more authority, and I swear to you by twenty Jupiters, that he never did. I am quite sure my friend stated exactly what he thought to be fact; but had he passed his finger into the rectum while the tube lay in that cavity, he would have discovered his mistake, for he would there have found the tube coiled on itself, and ready to appear at the orifice through which it had entered. It may be said it is futile to insist on so harmless a mistake. However, I assure you, the notion generally propagated is not one of the innocency you may imagine, and here is a proof in point. This phial contains an intestine perforated by the tube. You percieve there is a stricture or narrowing of the part, which is a position of the sigmoid flexure of the colon. This disease produced constipation, a slow inflammation of the abdomen, and a train of symptoms bearing a strong resemblance to those of the chronic forms of strangulated hernia. The patient was treated with judgment by Mr. C——e. This gentleman was an enthusiast on the subject of the tube, which he pledged himself to have introduced to its full length, being two feet and a half. From what I have already said, you are aware I must have doubted the truth of his assertion, although corroborated by the fact that a large terebinthinate injection had been received and retained. As it was deemed prudent to repeat the lavement, I waited to see it administered. After Mr. C——e had encountered some difficulty, at about where an arrest usually takes place, the instrument advanced with a degree which excited my astonishment, but did not awaken my suspicion. For a moment I resigned my opinion, and I believed that to be possible, against which I had so long contended. I delayed no longer in the apartment. On my return in a few hours, I was informed that every drop of the injection had been retained. There was no stool, the swelling of the abdomen had increased considerably, it was more painful, fluctuation was obscurely perceptible; in a word, every symptom became an index which pointed to the grave. The post mortem examination exposed the injection in the cavity of the peritoneum; and here we have afforded by the dead a monument where the living can read the mischief of badly weighed opinion, and the danger of presuming ignorance. If two or three glysters be properly given, without a satisfactory effect, perseverance in the use of them holds out little prospect of advantage. We are driven by great difficulties—we remember bleeding—we resume medicine by the mouth, and we

are again tempted to try the efficacy of injections. We use fomentations—we advise the warm bath—we prescribe blisters—we dress their surface with mercurial ointment, and we administer calomel even to ptyalism, a practice to which we should early have recourse from the known antiphologistic properties of this medicine. These, and these only, constitute our resources. It is now many, many years since I first ventured to praise the use of opium in inflammatory complaints. I was then laughed at. My opinion was pronounced a crudity, and I was thought to have advanced a frivolous doctrine, that I might attract with speculative novelties those whose respect and attendance I could not command by a more solid material of instruction. I remember I did not speak on the subject with more sanguineness than my experience warranted. But my convictions of the value of the remedy were strong, because its powers seemed signally displayed in the hopeless case of Elizabeth M'Cue, on whom I had lately operated for strangulated hernia. Further experience has confirmed my reliance on opium, so that now I feel no hesitation in recommending its use to your adoption. Venesection being performed to a proper extent, I direct two grains of watery extract, the preparation I prefer, and from three to five grains of calomel to be taken every third hour. If these means prove fruitless, I do not know whither we are to turn ourselves for success. I have learned to distrust all powerful drastics. If turpentine and croton oil have not succeeded in an early stage of the disease, they will disappoint your expectation when the disease has attained to its present formidable height. I am positive I have seen cases of strangulated hernia, where medicines have had their proper effect on the intestines, in which they have increased the secretions, and thus liquified the contents, but in which the natural expellant powers have been so weakened, or otherwise controlled, as to be unable to force an outlet for the distending and distressing accumulation. In these cases the introduction of the tube or the dilatation of the sphincter with the common speculum has been followed by signal relief. Flatus and the other contents rapidly escape; distension of the abdomen subsides; respiration is improved, and the general feelings of the patient are quickly more comfortable. These pleasing results were displayed in a striking manner in a case lately operated on by my friend Mr. Gregory. Symptoms had reached an almost severity, while the swelling and tension of the belly were the principal cause of the patient's complaint. The propriety of passing a tube up the rectum occurred to me for the first time. A large gum-elastic catheter was introduced, flatus and fæces were abundantly discharged. Relief instantly ensued, hope succeeded despair, and danger gradually gave way, until safety was finally confirmed.

Proper stools within the first thirty hours after operation are exceedingly desirable occurrences, and the nearer to that period they take place, the more favourable may be the inference we deduce. Postponed to a more distant time, they often appear with less promise; but when they happen with sudden and repeated profuseness, while the swelling of the abdomen increases, or it unexpectedly becomes collapsed, the hiccup and vomiting still persisting, they loose the last feeble hold of hope, and proclaim the certainty of approaching dissolution.

But let us direct our eyes to a more pleasing picture; and turning from the glaring contemplation of suffering and death, view scenes where tints of encouragement allure, and the prospect brightens with the cheering promise of anticipated recovery. Success has waited on all our proceedings. We have not left undone any thing which it was necessary to do, and we have nothing to desire but what is about to be realised. All wears an aspect of tranquillity, which meddling officiousness must not be permitted to disturb. The wound claims the strictest attention. The third day arrives; pain or foulness may require an examination of the part. The bandages are to be cut across, for then they are more easily removed. Compress and adhesive straps are now to be gently separated, and the process of cleaning is to be tenderly conducted. There may be partial union, the angles of the incision have joined together, the margins in the centre lie apart, the wound gleets, pus is not formed, the lips are slightly tumid, and an inflammatory blush surrounds them. Ligatures, if used, now present their crusted knots, they have fulfilled their intention, and should now be removed. Their excision is best performed in this manner:—Pass the rounded blade of a scissors into the noose with its flat surface towards the integuments, and snip it as close to these as you can, then catching

the knot, it may easily be withdrawn. If position and repose are properly observed, the more simple, light, and cool the dressing you apply, the better. A fold of linen or lint, wet with tepid or cold water, and occasionally moistened, answers extremely well. The fourth day there is pus, granulations appear, and cicatrization takes place in due time without any change of local management.

During the whole period of convalescence, diet should be very moderate; the article should be easy of digestion, and not likely to produce flatulency; the patient from his own experience will often guide your selection. The less food taken, the less occasion for opening medicines, which it is desirable to avoid as far as we can, in consequence of the disturbance attendant on their operation. If a day or two pass without an evacuation, an injection of warm water will be preferable to any remedy by the stomach. The bed-pan is always to be used, and the patient must be instructed to control as far as he can all violent respiratory efforts.

Well, you now inquire about the period at which a person may be permitted with propriety to leave his bed. Impatience will at a future time propose this very question to you. You must be prepared with a reply. My answer is, not sooner than the wound is fully cicatrized. I do not mean, that we are to trouble ourselves with a daily attendance, until that consummation arrives, or by doing so, expose ourselves to that no very creditable suspicion which with so much charity watches over all the motives and actions of medical men. But I think we should give the caution implied, and we should endeavour to procure acquiescence in the rule which it suggests. In fact, the patient should be restrained to recumbency until a truss can be steadily worn. This instrument gives the only security against future protrusions, and is the best guard by which a patient can be defended from the chance of renewed strangulation.

Gentlemen, hitherto we have been considering a case of strangulated hernia in which the symptoms were what is termed acute, and one in which they were also strongly marked. We tried the taxis without success; we engaged in the operation; we divided to the sac; we paused until we felt assured it lay exposed; we opened it; we examined the intestines; we found that part healthy, and consequently fit for immediate return. We divided the stricture; we restored the protrusion; we dressed the wound, and we minutely followed all the details of such a case, until it was conducted to a favourable issue. Now, we are going to engage in a more complex business, and to embark in greater difficulties. The sac is in a state of inflammation, from which the investing membranes are not exempt. The prevailing vascularity augments indistinctness to an amount on which you cannot be expected to calculate at first. Every surgeon must acknowledge the embarrassments, hesitations, and delays, to which he has been exposed in the predicament to which I have just alluded. For my own part, I have proceeded in the midst of doubts, unable to recognise those very structures which I have frequently exhibited in this theatre during my dissections, with a plainness and distinctness which might naturally lead an auditory to injurious inferences, unless pains were taken to defend the mind from misapprehension. How often in these circumstances have I asked my assistants in this stage of operation, is this the sac? How frequently have I heard the whisper which caution dictated, "Take care, that seems to be the sac?" How many layers have I not divided with all my circumspection, and yet without any positive certainty of the true nature of the membrane with which I was engaged, until I was informed on the subject by the appearance of another lamina beneath the incision I had just effected? After a protracted and cautious dissection, how often have I, both in my own practice and in the practice of others, looked upon the sac and touched it, and yet questioned, and heard it questioned, whether the part thus subjected to the examination of the senses was really the sac, or was not? These reflections teach us an error to which we are liable, when we reason from structural characters in the dead in favour of a perfect similarity of structural characters in the living. You understand me to speak with reference to diseased parts. Here is a hernia in which numerous envelopes are seen surrounding the sac. The principal value of the preparation consists in there being at once so many laminæ, and so distinct from one another. Surely such a specimen is calculated to improve, and if shown without note or comment, it furnishes a dangerous document. But I hope what I have so lately said contains both one and the other, and I trust my remarks may lead you to look out for dif-

ficulties in at least one instance of practice, in which, judging from all that you can see on this table, you might excusably suppose facilities to accompany every step of your proceeding.

We are now alive to the position in which we are placed. On our chart are so few written shoals through which you must learn to steer by the guidance I have given you. But we approach more serious dangers; the question is no longer between investing membrane and surrounded sac. It is this.—Is that which now lies before us the sac or the denuded intestine? and have we exposed the latter without being conscious of having divided the former? Which of the two the part exposed really is, one might presume, to be a matter easily determined. Conjecture flies before facts. The point in question has been raised in my presence during the broad day, as well as in the unsatisfactory light which night affords, in the silent attention which should preside at every operation. I have seen a first rate anatomist, and an excellent operative surgeon, open the sac without knowing that he had done so. I checked his hand in the moment when he was about to perforate the intestine. He proceeded with the rapidity confidence infuses into our actions. I restrained his *ardour*, and won his lasting gratitude. I interposed, I could not then tell why, and I am even now at a loss to say, the appearance, or what it was, that influenced me at the time. Perhaps it was that his movements were too hurried, and that I thought he had forgotten the "sit cito, si sit bene," I instinctively interposed, and thus recalled him to a consciousness of danger, which he had for one serious moment omitted to remember.

Now, you will expect me to inquire, is there any satisfactory evidence which can enable a surgeon to distinguish between a hernial sac and the intestine it contains. I think there are sufficient diagnostics in by far the greater number of instances. In the first place, when our incision has descended through the superficial covering of the tumour, and it arrives at that mass of structures, whose indistinctness first attracts us, I am sure we can ascertain the presence or absence of intestine. If we have any touch, we cannot be deceived. If there is elasticity there is intestine, there is fluid in the sac, or these are both together. Elasticity near to the surface now under the hand declares gaseous intestinal distension, or saccular serous accumulation. At a distance from the hand elasticity is confined to a comparatively small extent, and is, I may say, invariably wholly intestinal. If I have written my record true, we are furnished with a guidance which is not to be despised. If I am deceived in these sources of reliance, I will most gladly submit to any authority, who will take the trouble of laying my mistake before me; until then, the good I know I must be content to hold, and earnest in my conviction of its value, I will share with you what I conceive to be some approach to a means of diagnosis. In the second place, I never saw a hernial sac, however easily, and therefore deceptively insulated, or however shining, as though it enjoyed a silvery external surface, on which I could not trace the fragments of a broken up cellular connexion. Such a union never exists between the intestine and its saccular investment; I admit a very intimate adhesion between the intestine and the sac; it is exemplified in this preparation; close inspection will disclose characters of great dissimilarity; dissolve the junction in cases in which mistake may be imagined to arise; and the surface of the intestine is wholly bloodless, and the silvery eminences which remain are removeable with ease. The surface of the sac, on the contrary, exhibits marks of blood, and the forceps can readily raise into view the remnants of cellular disruption. In the third place, some information is to be derived from the position held by the larger vessels; in the intestines they are disposed transversely, as to the tube; in the peritonæum, being derived from many sources, they are found to ramify in a variety of directions.

But these difficulties are chiefly attendant on cases of some duration, and in which trusses had been worn. I have often found the sac inflamed, yet well defined, and admitting of easy insulation in very old herniæ, to which these instruments had since been applied; and again, I have met with instances in which although topical pressure never had been used, numerous congested laminæ maintained an intimate connexion with a sac, in itself so fine and transparent, that the contents were quite visible, and even small flakes of lymph were discernible on their surface. I here show you an instructive preparation. The protrusion is not larger than a walnut, and it is contained in a cyst thirty times its magnitude, surrounded by many membranous plates, of unusual depth and denseness. Now, you might suppose, were such a case strangulated,

an operative would encounter a good deal of perplexity. But the opposite is the fact; for here there would have been found a quantity of fluid sufficient to justify bolder proceedings, and to encourage us to open into the sac at once, without a tardy and unnecessary dissection of the superincumbent laminæ.

Having so far assisted you with respect to the sac, I shall endeavour to instruct you on the subject of its contents, and the impediments which these conditions occasionally oppose to our final success. If the protruded parts be healthy, you know the line of conduct you are to observe. But here the term healthy is not intended to imply a natural appearance of the intestine, which indeed is rarely met with; we use the term to signify a state of disease less considerable, and of course less important than other states, in which the same parts are sometimes found. Now, these states are congestion, inflammation, mortification, sundry kinds of adhesion, and other degenerations of structure. However, I propose to confine my remarks at present to the three first of these. Nothing may appear to you more easy than to distinguish between these three states of an intestine, yet, in point of fact, there are hindrances which prevent a just decision. This may not be material, as far as congestion and inflammation are concerned, for in both states the return into the cavity of the abdomen is the best practice we can adopt. The importance of the disability under which I am sure we labour, is most strongly seen in cases in which we are expected to pronounce between inflammation and gangrene of a bowel. This bears essentially on practice, and if there are any means by which we can judge between these conditions of a part, it is assuredly our business to understand them. But where is the definite criterion? For my own part, I have been an eye witness of the difficulty. In extreme cases of contrast, I am quite aware plainness of character precludes an error of judgment. There are, however, instances in which characters are faintly written. These are the examples which, try discrimination, expose to ridicule all speculative attempts to establish features of difference, and mark out the guidance by which inexperience may offer to direct you. When things broadly opposed to each other are placed before my senses, can it be presumption to say I understand them? especially confessing, as I freely do, that when the shades of contrast are less distinctly marked, my power of setting similitudes side by side, and marking the circumstances in which they do not correspond, fails me in a degree so entirely and utterly complete, that even a conjecture must be considered as unfit for a single practical purpose. Now let us approach the test. A sac is opened; the whole contents are view; they are all changed in natural aspect, they are all discoloured. No matter what the other parts may be, the intestine is the part which absorbs, and mainly absorbs, the whole of your attention. The appearance alarms; a question springs into the mind —Is this mortification? It is asked of ourselves before we can give utterance to the sentiment. In a season not admitting of much delay, this question must be answered before we are authorised to proceed. To put this difficulty before you, in what I conceive to be the most instructive light, I shall first consider the question as applicable to the whole of the protruded part. Certainly, if your opinions are fixed by the usual descriptions of a dead intestine, you may be misled; such descriptions are taken from those cases in which mortification depends on preceding inflammation succeeding to great vascular congestion: and they will not be applicable to all other cases of intestinal gangrene. Thus, in the man I formerly mentioned as having walked to my house, there was not a single vessel to be seen upon the protrusion. The colour of the part, which was a sea-green, was equally diffused. The intestine was distended; the parietes were thin and transparent, and I may add its general characters bore a strong resemblance to the semi-putrid intestines you so frequently meet with in your dissections. I never saw but one case, in which the entire of the protruded intestine had died from inflammation, the result of stricture. In this instance there was no operation, but I examined the parts in an hour after the death of the patient, who had been for eight previous days under my care. The intestine was the colour of a fully ripe mulberry; it felt soft and flabby, and it easily gave way, as if it were wetted brown paper.

When matters are, as in either of the two examples I have adduced, I think we have means by which our opinion may with certainty be directed. But the great nicety lies where the protrusion is but partially changed, and where it is expected we must settle the extent and degree of those changes before we can properly advance to any other state of

operation. In external disease, we know how hard it is to assign the limits between congestion, inflammation, and gangrene, by which I mean the absolute death of a part.

We fully know, that all three states exist, but how shall we arrive at the precise lines by which they are separated from one another. And yet, drawing conclusions from many of our partial instructions, one might suppose such particularity of knowledge to be perfectly essential. Now let us see how far it is required. The whole contents are deeply discoloured. If they are merely congested we return them. If they are only inflamed we give them back to the cavity of the abdomen. But if a part be mortified (and this supposition implies that we can determine the extent of the mortification) what is to be done? It is a serious question. It demands a considerate answer; and therefore I give you my most deliberate reply. Should all the parts be dead below the orifice of descent, divide the stricture with as much gentleness as you can command, and leave them so. The lesson is peremptory. Nature demands obedience. Further interference, which the pride of skill is ever so prone to suggest, begets disturbance not to be calmed or remedied by the most ingenious aids which professional sagacity can contrive. Nature seems sensible of the violence she has sustained, and sets herself at the elaborate work to provide a recompense temporary or durable, for a function lost or only for a time suspended. We are to second, but not to endanger the success of these preserving efforts; and that we may do so with effect, it will be proper to inquire from pathology about the manner in which she endeavours to repair an injury sustained in an organ so essential to the perfection of her economy. Adhesion is a great instrument of her agency. By its means an outlet is prepared for the fæcal current, the cavity of the peritonæum is defended from all the dangers consequent upon the effusion of the intestinal contents; and a provision is very commonly made, by which the previousness of a canal interrupted by destruction may in progress of time be conveniently restored. It is at the stricture, and at some distance within it, this work of reparation is set up, and this is the reason of the caution I repeat: dilate the stricture as gently as you can, commit the rest to the superintendance of those natural laws to which man can scarcely presume to administer.

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By Mr. WARDROP,

At the Hunterian School of Medicine, Great Windmill-street.

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Arrangement of the Lectures.—Difficulties of arrangement and selection of objects; limits of surgery undefined; plan of this course.

Therapeutics.—General observations on the different means for alleviating or curing diseases; arrangements of these; external; internal; local, and general remedies; diet and regimen; the abstraction of blood; operations of surgery.

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tic; diseases of the coats of arteries; aneurism; dilatation; arterial varix; ligatures; arteriotomy. *Veins.*—Structure, diseases, and injuries of veins; inflammation; varix; nævus; hemorrhoids; venesection.

Diseases of the Nervous System.—*Brain.*—Structure, diseases, and injuries of the brain; its membranes and the scalp; compression and concussion; operation of trepan; sympathetic affections. *Spinal cord.*—Diseases and injuries of the spinal cord; inflammation; caries; curvature; spina bifida; fracture; dislocation, and concussion. *Nerves.*—The structure, diseases, and injuries of nerves; neuralgia; wounds and contusions; neurotomy.

Diseases of the Cellular Membrane.—The structure and diseases of the cellular texture; phlegmon and carbuncle; abscess and fistulæ; encysted tumours; œdema and emphysema; setons and issues.

Diseases of the Mucous Membrane.—Structure and diseases of mucous membranes; inflammation of the gastro-pulmonory and genito-urinary mucous surfaces; strictures of mucous canals; use of bougies; excoriation and ulceration; warts; polypi; calculous concretions.

Diseases of the Skin.—General observations on the structure and diseases of the skin and pilous system; inflammation; erysipelas; chilblain; warts; corns; ulcers; wounds; and regeneration.

Diseases of the Serous Membranes.—General observations on their structure and diseases; inflammation; empyema; dropsies; operations for; wounds of the serous cavities.

Diseases of the Synovial Membranes, Bursæ, and Articular Cartilages.—Structure and diseases of synovial membranes; inflammation; dropsy of the joints; moveable bodies in joints; diseases of the bursæ; inflammation; ganglion; inflammation of the articular cartilages; ulceration; anchylosis.

Diseases of the Osseous System.—Observation on the structure and diseases of the bones; inflammation of the periosteum and medullary membrane; fractures; dislocations; artifical joints.

Diseases of the Muscular and Tendinous Systems.—Observations on the structure and diseases of the muscles and tendons; wounds; lacerations; contusions, and sprains.

Diseases of the Glandular System.—General observations on the structure and diseases of glands; mamma; testis; prostate gland; thyroid gland; salivary gland; tonsils; and absorbent glands.

Diseases of the Organs of Respiration.—General observations on the diseases of the respiratory organs; wounds of; larynx; trachea; extraneous substances in; operations of laryngotomy and bronchotomy; wounds of the lungs; emphysema; hemorrhage.

Diseases of the Organs of Mastication and Deglutition.—Diseases of the lips; gums; palate; salivary ducts; uvula; pharynx; and œsophagus.

Diseases of the Organs of Sense.—Diseases of; the eye and its appendages; nose; tongue; and ear.

Diseases of the Uninary and Generative Organs.—*Male.*—Diseases of the bladder; calculus; diseases of the urethra; phymosis and paraphymosis; cancer; diseases of the testes. *Female.*—Inflammation of the uterus and vagina; tumours; cancer.

Displacements.—Hernia; different species of; modes of reduction; operation for; bandages; prolapsus of the uterus and rectum.

Malformations.—Imperforated nostrils; external ear; iris; vagina; urethra; rectum; hare lip; fissure of the palate; club foot.

General Operations.—Amputations; acupuncturations; setons; issues; cautery; and moxa.

Concluding Address.—Review of the duties and qualifications of the surgeon; difficulties and evils of operations; abuse of operations; prosecution of study; clinical observations; experience and observation; moral treatment of the sick.

SYLLABUS

OF A

COURSE OF LECTURES

ON THE

PRINCIPLES AND PRACTICE OF MEDICINE.

By MICHAEL RYAN, M.D.

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PRINCIPLES AND PRACTICE OF MEDICINE.

Introductory Address.—General observations on medical science; its extent; objects and mode of study; uniformity of academic and collegiate courses of education; necessity of a comprehensive, general, and medical education; origin and antiquity of medicine; veneration entertained for medical practitioners; moral statutes of the medical faculty; qualifica-

tions of candidates for admission into the medical profession; necessity of studying medicine in all its branches; the science one and indivisible; course to be pursued to obtain a proper medical education; character of the medical practitioner; advice to medical students.

INORGANIC AND ORGANISED BEINGS.

First division, comprising a general outline of Physiology, Pathology, and Therapeutics.

Physiology.—The study of the functions of mind and body in health; or the doctrine of the animal economy.

1. *The vital properties or functions.*—1. Sensibility; 2. Contractility; 3. Caloricity; 4. Expansibility; 5. Sympathy; 6. Synergy.

2. *Functions in general.*—*a.* organic; *b.* intellectual. Functions purely organic.—The external sensitive, the internal sensitive; the locomotive, the vocal, the masculine and feminine reproductive; the digestive, the chyliferous absorbent, the circulatory, the respiratory, the exhalent, the secretory, and the general absorbent.

External sensitive organs.—The eye, ear, nose, palate and skin.

Internal sensitive organs.—The brain, spinal marrow, nerves, and great sympathetic system.

The locomotive organs.—The bones, muscles, tendons, and ligaments.

The vocal organs.—The larynx and its appendages.

The masculine genital organs.—The penis, testes, &c.

The feminine genital organs.—The vagina, uterus, uterine tubes, and ovaries.

The digestive organs.—The mouth, salivary glands, œsophagus (gullet), stomach, intestines, liver, pancreas, &c.

The chiliferous organs.—The absorbent vessels spread over the internal surface of the stomach and intestinal tube.

The circulatory organs.—The heart, arteries, veins, capillary vessels, and blood.

The respiratory organs.—The parietes of the chest (the ribs, muscles, mouth, nostrils, &c.), the trachea, diaphragm, bronchi, and lungs.

The exhalent organs.—The perspiring vessels.

The secretory organs.—The glands, liver, kidneys, testes, uterus, salivary and lachrymal glands, pancreas, &c. &c.

The absorbent organs.—The lymphatic vessels and veins.

The functions are animal and organic.—1. Animal; those influenced by the brain, which place man in relation to the different objects of nature. 2. Organic; those influenced by the sympathetic or ganglionic system, which affects the functions of internal organs independently of the will: the first influences life—the second, internal life, or nutrition.

1. ANIMAL FUNCTIONS.—Those which place man in relation to all bodies which surround him.

1. *The senses, or external sensations of vision.*—Palpation, audition, gustation, and olfaction. 2. *Internal sensations,* by which he perceives and meditates on the impressions transmitted to the brain by the senses. 3. *Locomotion,* or power of moving from one place to another, which enables him to seek and enjoy the different objects or sensations which are agreeable or disagreeable. 4. *The voice and speech,* by which sensations and thoughts are communicated. 5. *Generation,* or the perpetuation of the species.

2. ORGANIC FUNCTIONS.—Those of internal life are, 1. Digestion; by which the various aliments or foods are changed into chyle; the source of new blood, nutriment, and strength; 2. Chyliferous absorption, by which the chyle is conveyed to the heart; 3. Circulation of the blood, by which the chyle is conveyed to the lungs, and there transformed into blood, whence it is returned to the other or left cavities of the heart, and sent through the arteries to every organ or part of the body, for the nourishment of each; and the superfluous quantity is returned to the right cavities of the heart, to be mixed with the chyle, conveyed to the lungs, there vitalized, or arterialized, and again circulated throughout the body; 4. Respiration, by which the chyle is converted into scarlet blood by the action of the atmosphere upon it, and by a vital process; 5. Exhalation; or the deposition of certain principles of the blood on the external surface, and internal structure of organs; Nutrition, or the conversion of blood into the substance of organs; 7. General absorption, or the function of the lymphatic vessels, by which these take up, from the surface or internal parts of organs, certain fluids, or substances, which they convey into the circulation of the blood; and Calorification; or the formation of caloric, or heat, for the proper performance of the functions and sustenance of life.

Of the animal system in a state of health.

1. The nervous or cerebro-spinal system; intellectual or mental faculties; the passions; phrenology; animal magnet-

ism; sleep; dreams; somnabulism; catalepsy; asphyxia.

2. The sanguineous or circulating system; is the blood the source of life? history of the pulse.

3. The respiratory system.

4. The digestive system.

5. The symphatic or absorbent system.

6. The secretory or glandular system.

7. The muscular system.

8. Osseous or bony system.

9. The ligamentary system.

10. The system of the senses.

11. The generative or reproductive system.

Of the animal system in a state of disease.

This department is termed *Pathology*, or the doctrine of the nature of diseases, and is described in the same order as Physiology.

PATHOLOGY, OR THE DOCTRINE OF DISEASES.

Health, the free, regular, and natural performance of all the functions. Disease, a deviation from health, consisting in the derangement of one or several functions, or of the structure, position, or vitality of one or several organs. Disease applied by some to lesion or change of structure; disorder to change of function. Illustrations.

Diseases and disorders are considered in relation to their causes, invasion, progress, terminations, symptoms, signs, classification, and treatment. They may terminate in health, death, or other complaints.

ETIOLOGY, OR CAUSES OF DISEAESES.

The causes of disorders or diseases are all circumstances capable of deranging health. These are divided into *external* and *internal*. These are subdivided into remote, exciting or occasional, predisposing, and proximate. Diseases are further classed into acute and chronic, continued, intermittent and remittent, general and local. They are known by symptoms or signs, and the history of these is termed

SEMEIOLOGY, OR SYMPTOMATOLOGY.—Under this head are described all the signs of diseases afforded by the different systems in the physiological arrangement already mentioned, and include a full account of auscultic signs, the use of the stethoscope, the varieties of the pulse, furs on the tongue, &c. &c.

Diseases are classified in groups, under the term NOSOLOGY or NOSOGRAPHY.

Various classifications examined.

Diseases are divided into, 1. functional; 2. structural; 3. mechanical; 4. parasitical. They may be perhaps simple, but are generally complicated.

Classification of diseases according to morbid anatomy. They are also divided into hereditary, congenate, or innate, such as occur after conception during intra-uterine life; endemic, epidemic, sporadic, contagious, infectious, idiopathic or primary, and symptomatic or sympathetic.

Therapeutics, or treatment of diseases.

All remedial agents are comprehended in hygiene, pharmacy, and surgery.

Hygiene relates to the preservation of health, the regimen of the sick; pharmacy, to the preparation of medicinal agents; and surgery, to all manual applications.

Classifications of therapeutic agents examined.

Importance of materia medica, chemistry, botany, and pharmacy.

Action of medicines on the living body.

Medicines act on the living body, 1. by direct impression on the organs to which they are applied; 2. by their molecules being absorbed into the blood; 3. by sympathy; 4. by contiguity of organs; and 5. by revulsion or counteraction. Illustrations.

The effects of medicines are, 1. *immediate or physiological; 2. secondary or therapeutical.*

GENERAL PRECEPTS ON THE ART OF PRESCRIBING.

Attention to age, sex, temperaments, habit, idiosyncrasy or peculiarity of constitution, habit of life, strength, state of health, season, climate, state of the stomach.

Posology, or fixation of doses.—Principles of prescribing: 1. to augment, secure, or modify the effects; 2. to correct irritating effects; 3. to obtain the effects of two or more medicines; 4. to obtain effects which medicines were given separately could not be secured; 5. to render medicines agreeable. Chemical and unchemical preparations; enumeration of the formulæ and preparations in the principal pharmacopœiæ; extemporaneous prescriptions; necessity of writing them in full, and excluding all abbreviations and signs.

SECOND DIVISION.

PRACTICE OF MEDICINE.

GENERAL METHOD OF EXAMINATION.

Applicable to all diseases.—General remarks on clinical or bedside medicine; present condition of the patient; examination of all the physiological systems, the nervous, circulatory, respiratory, digestive, secretory, locomotive and sexual system, &c. in every case; age, sex, mode of life, residence, former diseases, predisposition, hereditary affections, state of general health, peculiarity of constitution, temperament; history of the symptoms, and causes of the present disease; is the disease structural, or functional? is there alteration of tissue, or is the complaint nervous or functional? importance of a correct diagnosis in every case of disease.

Method of examination applicable to diseases of the brain.—Intellectual faculties; sensitive system; locomotive system; digestive system; circulating system; respiratory system; urinary system.

Method of examination applicable to diseases of the chest.—Structure of the lungs; normal and abnormal respiration; signs afforded by auscultation; percussion, succussion; mensuration.

Method of examination applicable to diseases of the abdomen.—Examination of the digestive apparatus; tongue; mouth; matter vomited; evacuations; sensibility; examination of the urinary organs and generative system, summary of indications.

Method of examination applicable to lesions of the primary tissues.—Examination cellular, cutaneous, and mucous systems; examination of the muscular fibrous; fibrous; synovial; vascular and nervous systems.

Method of making autopsic and necrotomic examinations.—Method of examining the brain; spinal canal; vertebral column and thorax; examination of the mouth; pharynx, larynx, and trachea; examination of the abdomen; normal and abnormal states of organs.

Classification of Diseases.—Nosological and physiological arrangements; method founded on general anatomy; true Physiological medicine.

Diseases of the brain and its membranes; abnormal vascular action.—Encephalitis, cerebritis, phrenitis; inflammation of the substance of the brain; inflammation and diseases of the dura mater; arachnitis; acute and chronic hydrocephalus; diseases of innervation; apoplexy; paralysis; lethargy; coma; carus; cata phora; ramollissement, or softening of the brain; hypertrophy, tubercles, cancer, and ossification of the brain; mania; amentia; and idiotism; Neurites; *Neuroses*, Neuralgia, spasmodic disorders; constitutional and local irritation; abnormal sensations in different parts of the body; epilepsy; chorea; hypochondriasis; hysteria; delirium tremens.

Diseases of the spinal marrow and its membranes.—Myelitis, spinal arachnitis; hydrorachitis; spina bifida; tumours of the medulla spinalis and its membranes. Spinal irritation; concussion; relaxation; incurvation.

Diseases of the heart, pericardium, arteries, and veins; diseases of the circulatory system.—Physiology and pathology of the heart; endocarditis, or inflammation of the internal membrane of the heart and fibrous tissue of the valves; endocartis during the period of hypertrophic thickening of inflamed tissues, and of the development of adhesions, membranous, cellulo-fibrous or fibrous patches, and of vegetations or granulations; endocarditis succeeded by fibro-cartilaginous, osseous, or calcareous states of the valves of the heart, with or without contractions of the orifices of this organ; thickening and induration of the valves of the heart, with considerable contraction of the orifices; contraction of the left auriculo-ventricular orifice by induration and thickening of the bicuspid valve; contraction of the aortic orifice by induration and thickening of the tricuspid valve; contraction of the pulmonary orifice by induration and thickening of the sigmoid valves of the pulmonary artery; simultaneous contraction of several of the orifices of the heart, by thickening and induration of their valves; general and partial enodocarditis; its three stages, symptoms, diagnosis, prognosis, and treatment.

Carditis, or inflammation of the muscular tissue and intermuscular tissue of the heart; ramollissement and suppuration; ulceration, perforation, and rupture of the parietes of the heart; of the interventricular and interauricular septa, or partitions of the valves, tendons, and fleshy columns; ulcerative decarditis with an aneurismal cyst (aneurismal tumour of the heart); carditis succeeded by induration; symptoms, diagnosis, prognosis, and treatment of carditis, or inflammation of the muscular tissue, and of the intermuscular cellular tissue of the heart; softening, diffused suppuration, and abscess; ulcerations of the heart, with or

without the formation of an aneurismal cyst, perforations, induration of the heart; cartilaginous, osseous, calcareous, tuberculous, and cancerous diseases of the heart. Can these be developed without chronic inflammation of the heart? Partial, eccentric, and concentric hypertrophy of the left ventricle of the heart; simple hypertrophy, with the normal capacity of the ventricular cavity; eccentric hypertrophy, with dilatation of the ventricular cavity; concentric hypertrophy, with contraction of the ventricular cavity; hypertrophy of the ventricle, with similar abnormal conditions; anatomical characters, signs of hypertrophy, its influence on hæmorrhages in general, and on those of the brain and lungs in particular; local and general effects of hypertrophy of the different parts of the heart on the brain and lungs; treatment; dilatation, with hypertrophy of the ventricles; dilatation, with hypertrophy of the auricles.

Atrophy, or diminution of nutrition of the heart; causes and treatment. *Augmentation* and *diminution* of the absorption of the serous and cellular tissues of the heart; essential and primitive diseases of the physical and mechanical lesions of the heart; wounds of the heart; anatomical characters, causes, signs, diagnosis, prognosis, and treatment of ruptures of the heart; changes of dimensions of the cavities and orifices of the heart; anatomical characters, mechanism, and principal causes, diagnosis, and treatment; contraction of the cavities and orifices of the heart; displacements and herniæ of the heart; primordial vices of situation and conformation of the heart; dexicordia or congenital (primordial) transposition of the heart to the right side; displacement of the heart, thoracic, and abdominal viscera; communications between the cavities of the heart; acardia, bicardia, augmentation and diminution of the secretion of the serous and cellular tissue of the heart; pericarditis; sanguine congestion, suppuration; plastic effusion gradually transformed from an amorphous state to a state cellulous or cellulo-fibrous organization; pericarditis, in which the accidental products are transformed into fibrous, fibro-cartilaginous, cartilaginous, calcareous, and osseous patches; angina pectoris; hydropericardia; acute and chronic pericarditis; passive hydropericardia, and passive œdema of the cellular tissue of the heart; hydropericardia, caused by the rupture of a hydatic cyst in the pericardium; hæmopericardia, or effusion of blood into the cavity of the pericardium; pneumopericardia and hydro-pneumopericardia; aortitis; aneurism of the aorta; phlebitis; varicose veins; polypiform concretions, amorphous, without any trace of organization—with traces of organization; fibrous concretions completely developed; disorders of innervation, or neuroses of the heart; nervous palpitations; neuralgia of the heart; spasm of the heart, with bellows sound, and feline murmur, or purring sound (fremissement cataire); lipothymia, and nervous syncope; irregularities and intermittences of the pulsations of the heart.

Inflammation in general: idiopathic and specific; acute and chronic; treatment in general. Fevers inflammatory: typhous, intermittent, remittent, and exanthematous, or eruptive; yellow fever; plague. Cachetic diseases—morbid state of the blood: scurvy, purpura, anemia, malignant epidemic cholera, with blueness of the skin. Specific diseases: scroffula, cancer, fungus hæmatodes, melanodes, syphilis, variolous, vaccine, and urethro-vaginal viruses—virus of rabid animals; hydrophobia; poisoning by decomposed animal matter; dissection, wounds; poisoning by semidecomposed animal food, certain fishes, bites of venomous serpents.

Diseases of the respiratory organs, air tubes, and lung.—Structure of the lung; normal and abnormal states; catarrh; bronchitis; pneumonia, pulmonary apoplexy, hæmoptysis, empyema, gangrene, œdema, emphysema; pleuritis, hydrothorax, pneumo-thorax, hæmathorax, pneumo-hæmathorax; tubercles, phthisis, pulmonary abscess; anormal products in the lung and pleura; neuroses; asthma; pertussis, or hooping cough; pleurodynia.—Diseases of the air tubes: larvngitis, trachitis, trachitis spasmodica (croup), laryngysmus stridulus (spasmodic croup), ulceration of the larynx, or laryngeal phthisis; œdema of the glottis.

Diseases of the digestive organs, and their connexions, or organs of mastication and deglutition.—Gengivitis; stomatitis; glossitis; tonsillitis, or cynanche, angina tonsillaris; pharyngitis; cancer of the pharynx; angina vel cynanche ulcerata cynanche maligna.

Diseases of the organs of mastication.—Diseases of the lips, gums, teeth; odontia, painful dentition; odontalgia, toothache; cheeks; uvula and fauces; gengivitis; stomatitis, aphthæ; glossitis.

Diseases of the organs of deglutition.—

Staphylitis, or inflammation of the uvula; pharyngitis, cancer of the pharynx; angina, vel cynanche ulcerata, ulcerated sore throat, simple and syphilitic; angina gangrenosa vel maligna, putrid sore throat; œsophagitis, stricture, tumours, and cancer of the œsophagus; spasm of the œsophagus; dysphagia.

Diseases of the stomach.—Gastritis acutus et chronicus; ulceration of the cardiac and pyloric apertures of the stomach; scirrhus and cancer of these orifices; hæmatemesis, or vomiting of blood. *Neuroses of the stomach:* gastralgia, or gastrodynia, spasm of the stomach, flatulence, or gaseous-eructations; dyspepsia, pyrosis, or waterbrash, acid and alkaline secretions; cholera, malignant, epidemic, or blue cholera; perforation of the coats of the stomach.

Diseases of the small and large intestines.—Enteritis, inflammation of the small intestines; duodenitis; of the jejunum, ilium, ileus, iliac passion; inflammation of the large intestines, cœcum, colon; colitis; dysentery; architis, or inflammation of the rectum; diseases of the rectum, stricture, ulceration, cancer; hæmorrhois; piles; entralgia, intestinal irritation, colic, colica pictonum (painter's colic), intussusception; vermination, or intestinal worms; alvine concretions.

Diseases of the liver.—Hepatitis acutus et chronicus; abscess; hydatids, or encysted dropsy; hepatalgia, fungus, scirrhus, cancer, ossification, and other degenerescences of the liver.

Biliary concretions, or calculi; icterus, or jaundice.

Diseases of the spleen.—Splenitis acutus et chronicus; enlargement of the spleen (ague cake); splenalgia.

Perotonitis; adhesions; effusion, ascites, abdominal dropsy.

Diseases of the mesentery and pancreas.—Anomolous tumours in the abdomen.

Diseases of the urinary organs.—Nephritis; calculus in the kidney; gravel; calculus in the ureter, bladder, urethra; suppression of the secretion of urine; excessive secretion, diabetes; normal and abnormal states of the urine; cystitis; hæmaturia. Diseases of the urethra.

Diseases of the generative organs.—Syphilis; blenorrhagia; phymosis, paraphymosis; gangrene, cancer; diseases of the testes.

Diseases of the female organs.—Metritis; cancer uteri; uterine tumours; elytritis, or inflammation of the vagina; diseases of the ovaries; (see Syllabus of Obstetricy.)

Diseases of the organs of sense.—Diseases of the eye, tongue, ear, and nose.

Diseases of the skin.—Anatomy, physiology, and pathology of the skin; treatment in general of cutaneous diseases; various classifications of diseases of the skin; of Mercurialis, Lorry, Retz, Plenck, Derien, Wilson, Willan, Bateman, Plumbe, Dendy, Alibert, Paget, Rayer, Biett, Cazenave and Schedel, Green; lecturer's new classification. I. Dermatites. II. Dermohæmorrhagiæ. III. Dermoneuroses. IV. Dermachromata, Dermoachroia, decolorations. V. Dermodyschroia, dyschroia, maladermia, discolorations. VI. Dermocaceccrises; abnormal states of perspiration. VII. Dermocryptoncoses; tumours of the cutaneous cryptæ or follicles. VIII. Adermata, congenital absence and defects of conformation and tissues of the skin.

Diseases of the appendages of skin.—Onychonosology, description of diseases of the nails; onyxis, onychia; onychohæmorrhagia, subungual ecchymosis; onychensarcia, the nail growing into the flesh; onycophthoria, morbid alterations of the nails; abonychia, absence of the nails; onychoptosis, fall of the nails; polyonychia, supernumerary nails; onychophyma, tumefaction or enlargement of the nails; onychogryptosis, curvature of the nails; onychodyschroia, accidental coloration of the nails.

Diseases of the hair.—Trichonosology; trichomatitis, inflammation of the hair; plica Polonica; canities, trcihodyschroia, decolouration; alopecia, baldness; atrichomata, absence of the hair; polytrichomata, supernumerary hairs; triachis, vicious direction of the hair.

Anomalous diseases connected with the hair and skin.—Tricho-dermo-ataxopathy; phthiriasis, morbus pediculari; pediculi; pulex; acarus scabiei, itch insects; sarcopta, flesh worms; æstrus; astromus; elephantiasis; lepra; Barbadoes leg; Cochin leg.

Diseases of the cellular tissue.—Structure of the cellular tissue; phlegmon; furunculus, or boil; anthrax, carbuncle; malignant anthrax; œdema; subcutaneous emphysema; induration of the cellular tissue.

Diseases of the mucous membrane.—Structure and diseases of mucous membrane; inflammation of the gastro-pulmonary, and genito-urinary mucous surfaces; imperforations, adhesions, and strictures of mucous canals; excoriation

and ulceration; polypi, concretions, foreign bodies.

Diseases of the serous membrane.—Structure of serous membrane; inflammation, effusion, dropsies; effusion of pus, empyema.

Diseases of the synovial membrane; bursæ and articular cartilages.—Structure of these tissues; synovitis; hydrarthrosis, dropsy of the joints; moveable bodies in joints; diseases of the bursæ; inflammation; ganglion; inflammation of the articular cartilages; ulceration; anchylosis; articular rheumatism; podagra, gout.

Diseases of the muscular and tendinous tissues.—Structure and disease of the muscles and tendons; contusions; sprains; wounds; lacerations; gangrene.

Diseases of the osseous tissue.—Structure and diseases of bones; inflammation; caries; necrosis; ossification of fractures; exostosis; periostitis; inflammation of the medullary membrane; general remarks on dislocations; fractures and diseases of the joints.

Diseases of the glandular and absorbent system.—Structure and diseases of lymphatic glands; scrofula; mesenteric disease; general remarks on diseases of the mamma, testis, prostate, thyroid, salivary glands, and tonsils.

Parasitical diseases.—Development and treatment of various tumours and abnormal growths, displacements, and malformation of organs.

DISEASES OF THE ORGANS OF RESPIRATION.

Application of Auscultation and Percussion to the Diagnosis of Diseases, Lungs, Heart, and Abdominal Viscera.

Bronchitis—Catarrh.—Bronchitis or catarrh is inflammation of the mucous membrane, which lines the internal surfaces of the bronchi, in the whole of their extent.

There is no râle, or ronch, or wheeze at the commencement of this disease.

A hyperemia or congestion of blood, more or less extensive, of the mucous membrane of the bronchi, is the only lesion we discover at this period of the malady.

But it may be enquired, whether the arrest of the mucous secretion, and the subsequent dryness of the bronchial mucous membrane, which are characteristic of the first period of bronchitis, have no influence on the respiratory bruit or murmur? No observer has as yet fixed his attention on this point except M. Raciborski. An attentive observation has convinced him, that at the commencement of bronchitis, the respiration is more rough than in the normal condition. I have also repeatedly verified the truth of this conclusion. This simple roughness of the respiratory murmur results from the friction of the air against the dry parietes of the bronchial mucous membrane. This sign is also observed at the commencement of eruptive and all other fevers, when the respiratory organs are simultaneously affected. The period of secretion supervenes in a short time, and the patients begin to expectorate a white, viscous, and ropy matter, more or less copiously.

The mucous membrane of the bronchi is as yet too sensitive to allow the secreted matter to remain in contact with it, so that it is expectorated in proportion as it is secreted, and in general does not at first produce any of the noises caused by the displacement of the secreted fluid.

Such secreted matters are not, however, foreign to the noises which are sometimes heard during the first few days of acute bronchitis. I believe it would be difficult to explain, in all cases, the sibilant râle which is sometimes audible at this period by the engorgement of the mucous membrane alone; and I am disposed to think that this râle is caused by a thin layer of viscid mucous lining the internal surface of the bronchi, whose canals are already more or less diminished by engorgement. This view will easily explain the sudden appearance and disappearance of this râle or wheeze, after the expectoration of a small quantity of viscid mucus. At the same time that the silibant râle is heard in certain points of the chest, another wheeze is frequently audible—the grave sonorous râle. This last is even perhaps more variable than the former, and it very often suddenly disappears in the very points in which a moment before its existence had been verified.

If the grave sonorous râle presents only at intervals, and disappears after expectoration, it is highly probable that it is owing to the vibrations of a certain portion of viscid mucus lining the internal surface of the bronchi, which either diminishes the calibre of the bronchi, or is effused on the contracted edges of these tubes; and that the engorgement of the mucous membrane is not as yet considerable.

It appears from what has been now observed, that it is often difficult at the commencement of bronchitis to declare its existence by the signs afforded by auscultation. Neither does percussion

afford us more light at this period, as the air generally enters in sufficient quantity into the lungs for them to present on percussion the clear normal sound.

All that I have now said applies to a slight acute bronchitis; but if this disease be very intense, and attains the severity of pneumonia, if the mucous membrane is considerably engorged to a great extent of the air passages, the sibilant and sonorous râles will be very distinct, in a large extent of surface, and persist for a long time. The air can no longer enter in sufficient quantity into the pulmonary vesicles, the vesicular murmur will be scarcely audible, and percussion yields a sound more or less dull.

When the matters secreted by the bronchial mucous membrane become more copious, and the expectoration is not proportionate to the secretion, the displacement of the mucosities during the passage of the air gives rise to a particular bruit termed mucous râle or humid bronchial râle, which is equally heard during inspiration and expiration; or it occasions the subcrepitous râle, when the displacement of the secreted fluid takes place in bronchi of small diameter; and this wheeze more closely resembles the crepitant râle of pneumonia, in as much as it is dry, and can only be heard, for the most part, during inspiration.

The mixture of the abnormal noises of respiration in bronchitis frequently resemble very accurately the cooing of doves, and other birds, or the sound made by a carpenter's plane.

When an acute bronchitis passes into the chronic state, the intensity of the inflammation diminishes, but the auscultic signs of the first state most frequently persist, and we observe others.

It often happens, when the mucous membrane of the bronchi is the site of hyperemia or congestion for a long time, that one of the bronchial tubes is obliterated, in consequence of the engorgement of the mucous membrane alone or conjoined with the other tissues which constitute the bronchial parietes. In this case, percussion generally yields a clear sound, but on auscultating the region which corresponds to the part of the lung receiving the obstructed branches of the bronchi, we do not hear the respiratory murmur.

The same absence of the respiratory murmur is observed in vesicular emphysema, but although the confusion of these two morbid conditions would not be attended with any dangerous consequences, we may often distinguish them by the signs afforded to by auscultation. Thus the obstruction of a bronchus has been mistaken for emphysema, but in a few days the respiration was audible in a part in which it was before absent. Had the case been one of emphysema, the respiratory murmur would not have been audible in so short a time.

At another time it is a viscid expectoration that obstructs a bronchus. If this obstacle occurs in one of the first bronchial divisions, it produces considerable dyopnœa, the patient raises himself from the recumbent position, and makes vain efforts to respire. The chest when percussed gives a clear sound, but the respiratory murmur is obliterated over the whole portion of the lungs which receives the branches of the obstructed bronchus.

The instantaneous change in a region which previously yielded the abnormal sounds of auscultation, will enable us to distinguish this condition from the preceding ones. If, unfortunately, we did not recognize it, and apply a proper remedy, the patient would quickly perish. M. Andral cites a case of this kind in his excellent work *(Clinique Medicale.)*

Dilatation of the bronchi is of frequent occurrence after chronic catarrh, and it may occupy a whole tube, or only part of one.

In the first case, the air passing through bronchial tubes of considerable calibre, produces a souffle more or less diffuse. And if there be any fluids in the air passages, the air by displacing them will occasion a mucous râle with large bubbles, nearly resembling the cavernous or gurgling wheeze. When the patient thus affected begins to speak, the voice forcibly resounds throughout the whole extent of the dilated bronchi, so that we sometimes hear bronchophony and even pectoriloqy.

If percussion is made over the course of the dilated bronchi, it affords a more clear sound than in the normal condition, and sometimes the *bruit de pot fêlé* (metallic sound of a broken pot). But if the dilatation is moderate, and attacks several bronchi at once, percussion will most frequently offer a dull sound, the effect of the occlusion of the vesicular cavities, compressed by the parietes of the dilated bronchi.

After what has been now stated, it appears, that there is considerable analogy between the signs of auscultation afforded by dilated bronchi, and those of a cavern; as cavernous respiration, gurgling, and pectoriloqy.

But if these phenomena are repeated over several points at the same time, which is the case in dilated bronchi extending over a considerable part of the chest; if during the disease no signs of tuberculous phthisis are present, such as excessive perspiration and diarrhœa, the diagnosis ceases to be uncertain. But it will be much more difficult, when the dilatation is confined to a single bronchus, which will be in a condition very analogous to that of a cavern. In both cases the cavernous wheeze and pectoriloqy will be circumscribed; and in both, percussion may elicit the bruit de pot fêlé. It is only then the presence or absence of the rational signs which can throw light on the diagnosis. Nevertheless, mistakes have been made, and partial dilatations of the bronchi, accompanied with copious and fœtid expectoration, have been supposed to be caverns.

If catarrh continues for a long time, the parietes of the bronchi lose their elasticity; expiration takes place incompletely, which facilitates the dilatation of the extreme bronchial ramifications, already favoured by the fits of coughing. The dilatation of the vesicles remains nearly stationary, and in autopsies they are frequently perceptible to the naked eye. This state of lungs has been known since the time of Laennec, under the name of pulmonary emphysema.

The air cannot dilate the vesicles to a greater extent, and these not being able to retract during expiration, there is no respiratory murmur. Percussion yields a clearer sound than in the normal condition, as the quantity of air contained in the lungs is greater than in the healthful condition.

The persistance of the emphysematous state makes the lungs acquire a considerable volume; and the chest sometimes enlarges and becomes protuberant on the side corresponding to the disease.

If in the course of chronic bronchitis, which is the morbid state from which emphysema commences, there supervene several attacks of acute bronchitis, the fits of coughing increase in frequency, and by their efforts often rupture the distended pulmonary vesicles. In such event the air escapes by this new passage into the interlobular cellular tissue, and raises the pleura. This passage of the air occasions a particular noise, known since Laennec's time, by the name of *craquement ou râle crepitant sec à grosses bulles*, dry crepitant wheeze, or ronch with large bubbles.

If the air thus extravasated raises the pleura, and forms kinds of phlyctænæ, these are rubbed by the movement of the pleura during inspiration and expiration, to which the term *frottement ascendant et descendant*, ascending and descending friction, has been applied.

PNEUMONIA. PNEUMONITIS.

Pneumonia is an inflammation of the parietes of the pulmonary vesicles alone, and of the parenchyma, or combined with the intervesicular cellular tissue. This disease, though of extremely frequent occurrence, was often mistaken before the discovery of auscultation and percussion, and in many cases cannot be accurately understood without the aid of these means of diagnosis.

It is true that expectoration is often characteristic of the existence of pneumonia, but this sign may be wanted, or bear the same appearance as that of bronchitis. Auscultation alone, or aided by percussion, removes all difficulty, and enables us to distinguish the one disease from the other.

At the commencement of the hyperemia or incipient congestive state of inflammation, of which the vesicles are the site in pneumonia, there is an arrest of all secretion; and a dryness in the whole course of the inflamed aeriferous canals.

But the secreting period arrives very speedily, and although it does not manifest itself at first by any expectoration, we can readily discover, by means of auscultation, the presence of fluids in the vesicles.

The fluids concur with the air in forming, during each inspiration, small bubbles, whose rupture gives rise to a particular sound, similar to that produced by the ebullition of a greasy substance. This is designated the *râle crepitant*, the crepitant wheeze, already described, and it constitutes the first auscultic sign of pneumonia. It is distinguished from the mucous wheeze, because it is never heard except during inspiration, and is accompanied by a character of dryness.

According to M. Raciborski, there are two kinds of crepitant râle:—

The râle crepitant très-fin, or slight crepitant wheeze, is analagous to the sound made by rubbing coarse hair between the fingers, or by tearing English taffeta, or other silk, popularly called lining silk, or Persian. This is characteristic of pneumonia, and is always discoverable. Nevertheless, it may perhaps be still confounded

with the very fine and dry sound of friction (bruit de frottement), which is heard in certain pleurisies with false membranes. The râle crepitant gros, great crepitant wheeze, strongly resembles the subcrepitant wheeze. Like the preceding, the latter is only heard during inspiration; but this character is also common to the subscrepitant wheeze. This variety is by no means so pathognomonic of pneumonia as the preceding; and, without changing its characters, it is at one time taken for the crepitant râle, at another, for the subcrepitant, according as the other symptoms that accompany it, are those of pneumonia, or bronchitis.

The crepitant râle is never heard alone over the whole extent of a lung, in the first stage of inflammation. The secretion scarcely ever commences at the same time in all the pulmonary vesicles. Some already contain a sanguinolent serosity, while others are still pervious to the air. Hence it follows that the crepitant wheeze, at the commencement, ought to be mingled with the respiratory murmur.

As the disease advances the secretion takes place in the vesicles, in which it did not previously exist, and the respiratory murmur is succeeded by the crepitant wheeze over a greater extent.

If, on the contrary, the disease diminishes in intensity, if the serosity is absorbed, the crepitant râle diminishes in extent, completely disappears afterwards, and is replaced by the vesicular murmur. The inflammation is as yet in its first degree; the parenchyma of the lung is infiltrated with fluids, the vesicles are only incompletely filled, and these liquids are susceptible of displacement. On incising the parts, these fluids escape, mixed with air, and produce a crepitation analogous to that which is heard with the stethoscope during life.

Percussion over the engorged part of the lung will give a duller sound than in the normal state; but the degree of dulness is not intense, as there is a greater or less quantity of air in the cavities of the vesicles.

If the inflammation augments in intensity, the pneumonia quickly passes to the second degree. The sero-sanguineous matter is secreted in greater quantity, its viscidity increases, and a moment speedily arrives when it completely obstructs the cavities of the vesicles.

The lungs are now of greater size; they do not collapse after the removal of the anterior part of the thorax; their tissue is more dense and consistent; and this state, from its resemblance to liver, has been termed hepatization.

This state of augmentation of consistence is now considered an illusion, as, according to M. Andral and others, the parenchyma of the lung is, like all other inflamed tissues, more friable, and is in a state of real ramollissement, or softening.

If the vesicles are uniformly distended with the sero-sanguineous, viscid, or solidified matter, the sections of the inflamed lobes will present united surfaces; but if the inflammation does not exist throughout with equal intensity—if only a small number of the cavities of the vesicles are obstructed, and the others filled with a small quantity of fluid, or are still permeable to the air, the secreted liquids will escape on incision. The parietes of the vesicles will collapse, and the distended vesicles will present red and prominent granulations above the level of the incisions.

When the lungs are in this condition, the air no longer enters into the obstructed vesicles, the respiratory murmur is no longer heard, but the bronchic souffle replaces it.

The voice will now resound strongly in the bronchi, and there will be bronchophony.

On percussing the parts of the chest which correspond to the lungs in the second stage of inflammation, we perceive a resistance and dulness of sound, analogous to those experienced by striking a piece of flesh.

These signs are invariable, whatever be the position of the patient; and distinguish pneumonia in the second stage from effusion into the cavity of the pleura. All that has been said with regard to the appearance of the crepitant wheeze, is equally applicable to the souffle and bronchophony.

When pneumonia passes from the first to the second stage, we scarcely ever hear the two last mentioned signs over the whole extent of the inflamed lung, but in certain points only, while in the others we still find the crepitant wheeze. In proportion as the disease advances, the extent of the crepitant wheeze diminishes, and that of the bronchic souffle proportionably increases. Finally, a moment arrives when we do not hear any noises over the whole extent of the inflamed lung, except the souffle and bronchophony.

After pneumonia has arrived at the second stage (red hepatization, or ramollissement), it may take two opposite

courses: either the disease advances and passes into the third stage (grey hepatization, or ramollissement), or it proceeds towards cure.

The auscultic signs of pneumonia in the third stage do not differ from those of the second stage; the anatomical character of both degrees are nearly the same, except that the parietes of the inflamed vesicles secrete pus in the third stage, instead of the sero-sanguineous fluid in the second stage.

The pus is generally diffused in the pulmonary parenchyma, so that an incision of the lung in the inflamed parts, will present a grey surface, covered with granulations.

The formation of abscess in the lungs is of by no means so frequent occurrence as was formerly imagined, and is now, since there is a more minute morbid dissection, but rarely observed.

The ancients supposed abscess in the lungs, when cavities appeared, which were artificially produced by careless dissection, or by the accidental pressure of the softened puemonary parinchyma, and filled with pus from the surrounding parts.

When an abscess is formed, it is distinguished by the presence of a gurgling souffle, and other signs of a cavern. The rapid appearance of these signs in the course of acute pneumonia, will enable us to discriminate between an abscess and a real cavern, the result of the previous existence of tubercles.

The same signs will enable us to distinguish gangrene when the lungs are affected with it to a circumscribed extent. The fetidity and other characters of the expectoration, point out the difference between the disease and a tubercular cavern or abscess.

But acute pneumonia, instead of terminating in any of the modes already described, may pass into chronic induration, which may come on primitively. In this case the signs afforded by auscultation will not differ from those of acute pneumonia, except by their progress and duration.

When pneumonia in the second stage, instead of following a progressive advance, proceeds towards resolution, the souffle, bronchophony, and dulness of sound gradually disappear, and are succeeded by other signs.

The lungs never pass suddenly from a state of red hepatization to a normal condition. This transition gradually takes place by the absorption of a part of the viscid matter, which obstructs the cavities of the vesicles. The remaining part becomes susceptible of being displaced by the air, so that we may hear the râle crepitant anew in the part where it was replaced by the bronchic souffle. This reappearance of the crepitant wheeze is named *râle crepitant de retour*, or return of crepitant wheeze.

All the sero-sanguineous fluid is absorbed, there is nothing remaining to produce the crepitant râle, and the normal or natural respiratory murmur returns. These changes do not occur simultaneously in all parts. Thus while the souffle in certain points is succeeded by the crepitant wheeze, or this by the normal respiration, the crepitant râle scarcely begins to appear in other parts.

According to all the preceding facts, it is manifest, that auscultation and percussion enable us to follow the incipience and progress of pneumonia; and that the ear can discover this disease in its different stages, when the dyspnœa, expectoration, and ordinary signs do not at all lead us to suspect its presence.

It would be wrong, however, to assert that auscultation alone is an infallible means of diagnosis.

When the inflammation only attacks certain points in the centre of the lungs, the abnormal noises, when any are present, will be more or less masked by the normal sound of the surrounding parts. The same thing will happen in lobular pneumonia, where numerous inflamed lobules are surrounded by sound ones.

It is extremely difficult to recognize by means of auscultation, a partial inflammation of the root of the lungs. M. Andral states, that the respiration is louder than natural or puerile in the side of the lung which is partially inflamed.

In some cases of pneumonia, all the râles may be absent in both sides of the lungs, and in other cases the bronchic souffle may exist alone, or accompany the crepitant wheeze, although this last usually precedes it.

At another time pneumonia is detected by means of the pathognomonic expectoration, dyspnœa, and high state of fever, although the ear cannot distinguish neither souffle nor crepitant râles; the respiratory murmur is scarcely heard, and a dulness of sound, more or less profound, replaces the clear sound of the normal condition. We have here another variety of pneumonia, in which both the crepitant wheeze and bronchic souffle are completely wanting. M. Piorry has also de-

scribed cases of peri-pneumonia notha, in which dulness of sound was the only sign.

These anomalies far from detracting from the important discoveries of Avenbrugger and Laennec, can only be fully appreciated, analysed, and explained by them.

OBSERVATIONS

UPON THE PREVAILING PRACTICE OF FORCIBLY COMPRESSING THE ABDOMEN OF LYING-IN WOMEN.

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From the Medical Gazette.

There is one form of uterine hæmorrhage in which the bandage and compress are exceedingly useful, perhaps essential; not, however, for the purpose of restraining a flooding which still continues, but to prevent a relapse. This is the form so well described by Dr. Gooch, the hœmorrhage from vascular disturbance, in which the uterus, after having contracted, expelled the placenta, and assumed its usual size, form and hardness, yields again to the distending agency of blood poured into its cavity by the vessels in a state of excitement, unless that organ be prevented from again enlarging, by the mechanical compression. But, useful as the bandage is in these cases, it is not until repeated gushes have reduced the volume and power, if not the frequency, of the pulse, that it is at all efficient. It may, indeed, moderate the extent of hæmorrhage; it may cause the blood to accumulate in the vagina, often distending that canal until it becomes an enormous pouch, flaccid and unresisting, like wet chamois leather, or to flow from the ulva, so as to afford external and unequivocal evidence of what is going on. But it has not the power of completely putting a stop to the flooding, until the turbulence of the circulation shall have been considerably subdued. Even then, the vessels, though still enfeebled, might yet allow a formidable or fatal drain into the cavity of the uterus, but for the interposition of the band and compress; which, partly perhaps, by the pressure which they occasion upon the weakened vessels, but principally, I believe, by the contraction of the uterine fibres, which they insure and perpetuate, are sufficient to intercept the blood in its course towards the inner surface of the uterus, and, consequently, to prevent its escape from the extremities of the arteries which open upon that surface. The duration of the hæmorrhage is thus shortened, and the life of the patient consequently preserved by forcible compression, from the omission of which, under such circumstances, I have known blood ooze from the minute vessels for many successive days, gradually accumulated within and distending the cavity of the uterus, expelled from time to time in the form of clots, reducing the powers of life to a degree only short of the destruction of life, and requiring at last the application of the band, and even, possibly, the introduction of the hand. In one case of this kind, in which I was consulted, such was the torpid and unresisting condition of the uterus from the loss of blood and frequent enlargement, that at the end of three days from the delivery I was obliged to introduce my hand for the purpose of removing clots and exciting contraction; after which, a towel drawn tightly over the abdomen, with the addition of napkins thrust into the hollow space between the spinous processes of the ilia and the bandage, effectually restrained the hæmorrhage, and secured the patient from the recurrence of a flooding which had bleached the countenance, enfeebled to a serious degree the constitutional powers, and all but extinguished life.

This is, in fact, a most important part of the treatment of such cases. It is not enough that the uterus shall have been emptied of its contents, and excited to contraction by the means employed; it is further requisite to prevent that organ from again enlarging in the absence of the practitioner; and this can only be effected by the band and compress. But the application of the binder is not justifiable at the commencement even of such a hæmorrhage. I know but of one writer who even seems to place any reliance upon it at that period; and, from his mode of recommending it, his confidence in it is obviously far from unlimited. In his observations "On Uterine Hæmorrhage soon after the Expulsion of the Placenta," he says, "The abdomen should be strongly compressed with the binder, and folded napkins placed under it; and, in addition, the hand of an assistant should be applied over the fundus uteri

firmly, to squeeze and press this organ." Now, it is clear that if the pressure of the bandage were sufficient, there could be no necessity for additional compression by the hands of an assistant; and, further, that if the band were made, as it should be, of an inelastic material, and secured with the requisite firmness, it must rather have impeded, than facilitated, such additional pressure upon the fundus uteri. Besides, when the binder is thus applied, it prevents our grasping, and consequently irritating the very part of the uterus from which the blood notoriously issues; for, although in a spirit of hyper-criticism, Dr. Gooch has been represented as not appearing "to have known that the placenta is most frequently attached to the posterior and lateral parts of the fundus and body of the uterus;" at least the writer to whom I allude, and who thus reproaches my late friend and colleague, assumes it to be a fact, though without adducing evidence in its support; and yet, by his previous application of the "binder and folded napkins," he prevents the possibility of grasping between the fingers and the thumb, the whole fundus uteri, including a portion of its posterior, as well as its anterior surface, and of exciting, therefore, the contraction of those very fibres whose agency is so desirable. But the fact itself is doubtful, or, at all events, there are not at present sufficient data to determine whether the placenta is in reality most frequently attached to the *posterior* and lateral parts of the fundus.* I have kept, indeed, no accurate record of the precise situation of the placenta in the numerous instances in which I have been called upon to remove it; but I have so frequently, in the course of this operation, been obliged to withdraw my left hand, which I had introduced because the curvature of the joints better corresponds with the hollow of the sacrum, and afterwards to introduce my right, that, still keeping the convexity of my hand in correspondence with the concavity of the uterus, I might peel off an adhering placenta firmly attached to the anterior surface, that my confidence in the truth of the alleged fact, that the placenta is "most frequently" fixed to "the posterior and lateral parts" of the uterus, is much shaken. Be this, however, as it may, at least there is not a shadow of foundation for an assertion which has been hazarded by a writer of great eminence, that "to discover this spot" (*i. e.* where the great bleeding vessels pierce the lining membrane of the uterus) "*at a time when there is no placenta within the uterus*, Dr. Gooch directs us to pass up the finger along the cord, aud observe at its entrance into the uterus whether it turn towards the front, the back, the right or left side, or straight up to the fundus uteri." It is perhaps scarcely necessary to rescue one so celebrated from this posthumous attack upon his reputation. He was guilty of no such absurdity as that imputed to him, as is clear from the following sentence, which he who runs may read and understand, unless exceedingly obtuse in intellect, or tainted by prejudice. "Besides," says Dr. Gooch, "*after the child is born, it is often several minutes before the placenta separates and descends*: if, DURING THIS INTERVAL, we pass up the finger along the cord, and observe at its entrance into the uterus whether it turn towards the front, the back, the right or left side, or straight up the fundus, we shall form a tolerably exact idea of the spot to which the placenta has been attached in this individual case." It was, therefore, before the expulsion of the placenta, and not, as has been represented, "*at a time when there is no placenta within the uterus*," that Dr. Gooch recommended the navel-string to be taken as a guide. If this guide had been removed by the expulsion or extraction of the placenta, then, as Dr. Gooch very properly observes, "it is true we cannot tell with certainty where the placenta was attached, and consequently where the pressrue should be applied; but as it is generally attached to or near the fundus, if the pressure be directed there, it will be generally right."*

M. Gardien seems to think that a bandage, properly applied, may *diminish after-pains;* and he enumerates this, therefore, amongst its useful properties, and as a reason for its application. But it

* "Il est bien connu que le placenta s'attache tantôt au fond, tatnot en avant, en arrière, ou sur les cotes, et quelquefois sur le col de la matrice."—(Velpeau, Traité, &c. Tome I. p 279.) Sur trente-quatre femmes, mortes enceintes, ou récemment accouchées à l'hopital de Perfectionnement, j'ai vu que le centre du placenta devait correspondre vingt fois à l'orifice, trois fois en avant, deux fois en arriere, et trois fois au dessous de l'une des trompes, et six fois seulement vers le fond de l'uterérus.—(Ibid. p. 298.)

* Gooch on the Diseases of Women, p. 353.

may well be doubted if it can exercise such influence, seeing that pressure is one of our great and principal agents for producing uterine contraction; that this is the object for which by most practitioners such pressure is employed, and that such contraction is commonly the cause of the very pain which M. Gardien, and a few others, represent the bandage as useful in preventing or controling.* Experience has convinced me that the bandage, so far as its influences these pains, has a tendency rather to increase than to diminish them; more especially (as was long since noticed by Mauricean, Peu, La Motte, Levret, and others) when the labour has been lingering, the effects violent, and the uterus consequently tender. When, therefore, these pains are inordinately severe, it is a good practical rule to examine the binder, and, if it appear to compress the uterus too firmly, to loosen it, or, what is still more desirable, to remove it. By so doing, the practitioner will be enabled to apply warm cloths, poultices, bags of hot bran or salt, the stomoch-warmer, or fomentations, which, after opiates, are the most beneficial amongst our remedies: whilst the employment of these must be entirely prevented by the bandage. La Motte, an amusing, and, for the time at which he lived, judicious, though sometimes a diffuse writer, gives an instructive case of the injurious consequences of "swathing a women's belly too tight;" and after having described the cure of this patient, whom he represents to have been "swathed to some purpose this time," the consequences being violent pains and fever, sudden cessation of the lochia, headache, and delirium, which yielded to first taking off the bandage and then applying upon the belly a compress dipped in warm milk, and throwing up a clyster of whey, he concludes with this reflection:—"Suppose this bandage was not attended with danger; as no good can result from it, is it not better to let women enjoy their liberty than to keep them sweating in this uneasy dress?†" Nor have I more confidence in Gardien's statement, that the bandage is capable of *preventing hernia;* on the contrary, like tight waistbands, it is infinitely more likely, by pressing upon the abdominal contents, to occasion than to prevent such complaint.

As to the *other effects*, ascribed to an alteration in the balance of circulation consequent upon delivery, and said to be prevented by a band, including inflammations, functional derangements of the liver and intestines, and even (according to Stoll and some others) puerperal peritonitis, they involve opinions far too speculative and hypothetical to influence our practice; and, I am inclined to think, are little better than mere make-weights, thrown into the scale to turn the balance in favour of the application of the bandage upon all occasions.

It thus appears that the binder is, at least, unnecessary in many cases; that it is an encumbrance upon some occasions, and especially in hæmorrhages, for the prevention and cure of which it has been so commonly recommended; that if applied judiciously, without unequal pressure, and without much force, it is generally comfortable to the feelings, and perhaps beneficial in its effects; and that in some rare instances it is even essential to the well-doing of the patient: but it is equally clear, that the time and mode of its employment require more discrimination and attention than has been commonly supposed.

Injurious consequences of the Bandage. It now remains for consideration how far the bandage, if it does no good, is capable of mischief. It is a general rule of almost universal application, that a remedy, if powerful for good, is, when injudiciously or unnecessarily employed, also powerful for evil; and it is so with these bandages, when applied so as forcibly to compress the fundus uteri. Those who have had opportunities of noticing the condition of the uterus where death has occurred soon after delivery, from any other cause than laceration or hæmorrhage, must have been struck with the bulk of the uterus and the extraordinary thickness of its parietes. This organ often reaches nearly to the umbilicus, and its walls are not unfrequently an inch and a half, or even more, in thickness. It occupies, therefore, considerable space, and is easily displaced from its situation by pressure upon its fundus. One effect, therefore, which is very frequently produced, when the bandage is drawn by one end whilst the other is fixed (and it is next to impossible altogether to avoid this) is *to force the uterus to one side of the abdomen.* This is commonly productive of much uneasiness, referred generally to one hip, sometimes to both. The broad, and one, at least, of the round ligaments, are put much upon the stretch upon the one side; the appendages of the uterus, including the ovaries and

* Traité d'Accouchemens, tome iii. p. 236.
† La Motte, by Tomkyns, p. 494.

fallopian tubes, very prone to take on inflammatory action, are pressed with force against the brim, formed by the prominent "linea ileo-pectinea," and the side of the hard bony pelvis on the other. Hence the foundation is often laid for permanent obliquity of the uterus, productive of considerable uneasiness, and, from an obvious agency, not unfrequently the cause of barrenness. That such obliquity of the uterus is thus occasioned, my own observation enables me to affirm, and is corroborated by the experience of my friend, Mr. Sweatman, who, as surgeon of one of our lying-in hospitals, as well as in his private practice, has had extensive opportunities of ascertaining the point, and who assures me that he has had frequently occasion to witness this result. But from the compression of the appendages of the uterus, to which I have alluded, there is reason to believe that much more formidable evils have occasionally occurred. When these important parts become inflamed after delivery, the disease is apt to degenerate into destructive or suppurative inflammation, and the very worst kind of puerperal fever consequently engendered. In such cases, after death, the ovaries are often found either reduced to a pulp, so as to break down upon the slightest handling, or matter is found deposited in their substance, or upon their surface; and the lymphatic vessels, sometimes the veins, are seen, in their course towards the general venous circulation, charged with pus. Even the fallopian tube has frequently undergone a similar change, its fringed extremity being loose and lacerable in texture, and pus being frequently found in its interior, or upon its surface.

Another effect of forcibly compressing the uterus must inevitably be to *push that organ lower into the cavity of the pelvis*, which some have even gone so far as to consider desirable, and to recommend the practice for that express purpose. By the very terms of this proposition, it is obvious that the tendency to prolapsus uteri, against which a large proportion of our observances after delivery are directed, must be thus very seriously increased. Even in the unimpregnated condition of the uterus, the means by which it is supported in its position are only capable of sustaining a given superincumbent pressure. Whatever can greatly increase its weight, or press considerably upon its summit, may push it below its natural situation; and hence Gardien, who has given a more copious enumeration of the causes of this disease than any other author with whose writings I am familiar, has mentioned, amongst those which may produce the disease in all women indiscriminately, "sudden and violent exertion of the body; carrying heavy weights upon the abdomen; *violent pressure upon that region*, whether accidental or habitual, whether from the weight of sarcomatous tumors, or steatomatous tumours of the mesentery; the violent shock produced by falling from a height upon the feet; riding in a rough jolting carriage; the strainings of constipation, sneezing, or coughing; long-continued purging, attended with straining; the abuse of purgatives; and long continuance in the erect posture." Now if these causes, to which I might add calculus of the bladder (as in an interesting example recorded by Mr. Paget, of Leicester,) enlargement of one or both ovaries, ascites, and fibro-cartilaginous tumours upon the summit of the uterus, can produce prolapsus even in those in whom there is nothing peculiar ("chez toutes less femmes indistinctement",) *à fortiori*, at a time when the uterus is large, thick, firm, and heavy, and the vagina relaxed; when moderate traction upon a navel-string may pull down the uterus, or the erect or sedentary posture occasion it to descend by its own gravity; we may conclude that pressure upon the summit of that organ by a "bandage consisting of a broad strip of some unyielding material (a jack-towel, for instance,") aided by the application of "two or three napkins, folded up as a pad, directly over the uterine region, &c.," and then drawn "as tightly as the woman can conveniently bear it over these," by which means the uterus is compressed "as effectually as if the hand were constantly upon it," must be calculated to produce a similar effect; and such is the result of actual experience, for I have again and again traced the first occurrence of prolapsus to this cause.

But not only is the uterus, by such pressure, pushed downwards into the pelvis, carrying with it the reflected vagina, but the *latter canal is sometimes thrown into folds;* the whole circumference descending, in some instances, until it forms a tumor of very considerable bulk at the vulva. I have seen it as large as the two fists united by their palmar surfaces, or a rock melon of considerable size. Such tumor is less firm in texture than the uterus, and has a patulous orifice at its most depending part, into which the

whole length of the finger may be introduced without reaching the os uteri, which still remains within the cavity of the pelvis. This disease would almost appear to have increased in frequency, *pari passu*, with the increasing prevalence of the practice of compressing the summit of the uterus after delivery. When Sir Charles Clarke published his "Observations on the Diseases of Females," so little was this complaint known, that, not aware of the existence of such a malady, he applied the term "procidentia vaginæ" to a morbid condition of the rectum, which is to that canal what the procidentia vesicæ is to the bladder; both diseases consisting of a descent of one portion of the organ (the anterior of the rectum, the posterior of the bladder); each, however, carrying downwards the portion of the everted vagina attached to it. To this complaint I have been in the habit of appropriating the term prolapsus, or procidentia recti, from the analogy which it bears, in cause, consequences, and treatment, to the prolapsus or procidentia vesicæ, and to distinguish it from the prolapsus ani, in which the whole circumference of at least the mucous lining of the bowel descends so as to form a tumor at the anus, but altogether unconnected with the vulva, and uncovered by everted vagina.

I have seen numerous instances of this complaint, which I suspected to arise from this cause, but none in which their relation to each other was more strikingly manifest than one which occurred to me in the course of last year. This was the case of a lady, who, whilst in India, had flooded so violently, in the course of a miscarriage at about the middle period of gestation, that her life was despaired of. After cold and the *plug* had been very sedulously employed, a bandage was applied so tightly as to impede her breathing; and her recollection was equally distinct as to the addition of a compress to the lower part of the abdomen. Her constitution was much shattered by the loss of blood; she complained of a very distressing sense of relaxation, combined with fulness within the pelvis; and at length she yielded to the urgent recommendations and remonstrances of her professional advisers, backed by the entreaties of her husband, and returned to her friends in England, for the benefit of her health.

She improved in her general health upon the voyage, but although she used very sedulously a lotion, of which her supply was abundant, sea-water, her local grievance continued. Upon her arrival, she consulted a very eminent practitioner of midwifery, who, telling her that her complaint was the descent of the womb, assured her that time and a pessary (with which he provided her) would cure her malady; that it would be unnecessary to do more than to wear the instrument constantly, with the exception of its occasional removal for the purpose of cleanliness, and to throw up, by the side of the pessary, an astringent wash; that she might go with safety to her friends in Northamptonshire; that he should not require to see her again for a very considerable period, and that it would be unnecessary for her to consult any practitioner in the country. The last statement she construed into an injunction not to see any other medical man, which she most rigorously observed; and was the more ready to obey, from a dislike, engendered by great reserve and delicacy, to talk about her peculiar malady; and for some months, therefore, she consulted no one.

After more than twelve months had elapsed, finding that she gained little ground, and that something was constantly slipping down by the side of her pessary, by which it was sorely pinched, she placed herself under my care. Upon examination, it appeared that although the uterus was somewhat below its average position, the vagina was principally in fault. This had been thrown into numerous folds of considerable size, and of such thickness as to lead to the impression that either the whole elastic substance of the vagina had descended, as well as its mucous lining; or if the latter only had been thrown into folds, it was obvious that the membrane had become greatly thickened. The sensation communicated to the examining finger, was like that which might be expected to be produced by cramming into the vagina the arm of a lady's long glove, composed of fawn or thin doe-skin, or even calf-skin, previously soaked in water, and forced in the direction of its long axis into a cylinder not more than half its length. It was the descent of one or more of these folds of vagina between the pessary and the circumference of the pelvis, that produced the pinching sensation, which was often so distressing, and occasioned such tenderness, as to oblige her to relinquish for days, and upon some occasions even for weeks, the use of her pessary.

It was manifest that, in this case, no pessary, which would not in the first place reduce the vagina to a plain surface, could be of avail, and that for this purpose a large one would be requisite. An elastic gum pessary, of large bulk, of an oval shape, and very softly stuffed with horse-hair, was introduced. She was directed to remain in bed until she became somewhat accustomed to the distension from the instrument, to remove it at the end of every few days, that she might clean it, then to remain a night without re-introducing it, and, upon such occasions, thoroughly to sluice the canal with a moderately astringent wash. At the end of a few weeks, she had not only lost the sensation of pinching, but the bladder performed its function without difficulty, and she could enjoy the luxury of a walk, which, from the period of her arrival from India, she had not been able to accomplish. I was able, after some months, to diminish the size of the instrument, and at length, having supplied her with a stock of pessaries of gradually decreasing size, and having increased largely her stock of spirits in consequence of the improvement in her condition, I was able to sanction her return to the East.

The evils I have thus adverted to are of no inconsiderable importance, and of no unfrequent occurrence. Though little noticed by writers, they occasion great permanent discomfiture, depress the spirits, and undermine the health. La Motte is almost the only author who has particularly noticed any one of these injurious consequences of "this bandage," which, "if improperly used, is attended with danger, being liable, by its too great tightness, to expose women to a relaxation of the uterus, which may thereby be forced too much downwards; as also to cause an entire suppression of the lochia, with all its concomitant symptoms*." But such evils are not the less real because they have escaped observation; and such remote consequences should influence our decision, and modify our practice as to the time when, and the manner how, the binder should be applied. It may still be employed "dans l'intention de satisfaire une vaine coquetterie" (Velpeau), "to give a comfortable degree of support" (Gooch), "so as to give an agreeable support to the muscles" (Blundell), and probably to diminish the disposition to syncope; but for these purposes the compression should be equal, and to a moderate extent only. In the language of Mauriceau, sanctioned, by adoption, by La Motte, Peu, Levret, Gardien, Velpeau, and others, it should be "simplement contentif.*" The rules upon this point laid down by Gardien are very judicious, and contain almost all that need be said upon the subject. They are these: 1st, that the bandage should support the viscera without compressing them; 2dly, that it should never be employed when there is abdominal pain, or any disposition to inflammation; and, 3dly, that when first applied it should be sufficiently loose *to allow the hand to pass easily between the abdomen and the bandage*†.

The precise form of the bandage is of less moment than the principles which should regulate its application. The loose and open skirt, with a broad band, generally provided for lying-in women, and denominated the guard, commonly answers the object of thus giving the proper support to the abdominal parietes and viscera. When, however, the patient is allowed to move from her bed, she may use either a band made expressly for the purpose, as Gaitskell's bandage, minutely described by Dr. Blundell;‡ or the flannel binder, before adverted to, as recommended by Dr. Collins, of Dublin. But as the intention in these cases is rather to avoid than to produce any considerable pressure upon the uterus, all pledgets, pads, and compresses, whether in the form of folded napkins, commended by the majority of writers, or the small pillow suggested by Dr. Blundell, should be discountenanced, as producing great heat and sweating in the part, as occasioning unnecessary pain, and as having a tendency to force the sexual organs below their average position.

The only legitimate object for the application of the compress is, where hæmorrhage subsequently to delivery has occurred and been restrained, to obviate the disposition to enlargement of the uterus from the accumulation of clots. For this purpose the binder must be drawn tight, even to the extent of embarrassing somewhat the action of the respiratory organs; and the pressure

* La Motte, by Tomkyns, p. 493.

* Malad. des femmes, liv. iii. c. 2. Also, Aphor. 250.

† Traite, &c. pp. 236, 237, 238.

‡ Obstetricy, p. 726, note.

must, in such cases, be directed to the uterus itself, by napkins thrust beneath the band. When, however, under such circumstances, this forcible compression of the uterus is required, it must be considered as a remedy to which we are driven to have recourse by a stern necessity; as one by no means devoid of mischievous properties; as employed, therefore, only to avoid or counteract another and a greater evil; is never to be continued longer than is justified by the necessity; and, therefore, to be removed, or at least loosened, and the compress to be taken away, when the patient has been entirely free for twelve hours from flooding. I would add, that where the uterus has been thus compressed, double caution is requisite to prevent the patient from getting into the erect or sitting posture, until all coloured discharge shall have ceased, and until the attempt can be made without producing any dragging sensation in the back, hips, and groins; for the cessation of such discharge, and the absence of such sensations, are the only proofs we can obtain, that the vessels of the uterus have regained their orthodox size, and that the uterus has no longer any excess of bulk and weight which may cause its descent in the erect posture of the trunk.

With these precautions the bandage may be made an useful obstetrical instrument, tending to the immediate comfort, perhaps the benefit, of the patient; but if employed indiscriminately, and so as to press with great force in the direction too commonly recommended, it is infinitely more frequently mischievous, than beneficial in its operation.

25, Half-moon-street,
Sept. 3, 1836.

PETITION OF THE MEDICAL PROFESSORS

OF THE

ANDERSONIAN UNIVERSITY OF AN EXTENSION OF UNIVERSITY REFORM.

Unto the Right Honourable the Lords Spiritual and Temporal of the United Kingdom of Great Britain and Ireland, in Parliament assembled,

The Humble Petition of the undersigned Medical Teachers in the Andersonian University of Glasgow,

Showeth.—That your Petitioners, impressed wtih deep sense of the importance of the Scottish Universities to this part of the United Kingdom, and aware of the many defects and abuses which at present exist in the constitution and usages of those Universities, have observed, with much satisfaction, that a Bill has been introduced into Parliament for the purpose appointing a Board of Visitors who shall carry into effect, under such modifications as may be deemed advisable, the alterations and improvements recommended in the Reports of the Royal Commissioners which have been laid before Parliament.

That your Petitioners having carefully examined those Reports, have found not more to their surprise than regret, that while many glaring abuses are therein indicated, and some most salutary reformations proposed, nevertheless, no notice has been taken of the greatest of all abuse in the Scottish Universities—an abuses which in the humble opinion of your Petitioners, is far more injurious to learning and to the community at large, than an of the abuses pointed out by the Royal Commissioners, or even than all of them put together. It is only after having for many years an intimate practical knowledge of the evils they are about to state, that your Petitioners venture to employ this strong language in approaching your Right Honourable House, to complain of the Monopoly of teaching at present assumed by the Universities of Scotland.

That the monopoly of teaching is enforced with different degrees of rigour and under various modifications in the different Scottish Universities, and your Petitioners conceive that they will best convey an adequate idea of the oppressive nature of this monopoly, by confining their statements to the monopoly assumed by the University of Glasgow, and more especially to that branch of the monopoly which relates to the teaching of medicine.

Your Petitioners, in the first place, beg to state that nothing can be more repugnant to the spirit and to the express terms of the fundamental charter of the University of Glasgow, than the assumption by the Principal and Professors of any monopoly in teaching. According to the charter all graduates are constituted teachers, and in the diplomas which your Petitioners, or most of their number, hold of the University, the privilege of teaching is conferred in the most explicit terms, but on their attempting to exercise that privilige, they are informed, by the rejection of their certificates, that the

Principal and Professors do not consider as obligatory a verbal promise solemnly given, and confirmed by a written document.

That the monopoly in teaching assumed by the Principal and Professors of the University of Glasgow, consists in this, that in conferring degrees in medicine, for which a certain curriculum of study on the part of the candidate is required, they receive no certificates of instruction but from Professors in Universities, or from teachers in London and Dublin, who, being at a distance from themselves, cannot enter into any immediate competition with them, while they reject the certificates of all other teachers, however well qualified, and even although holding their own diplomas conferring the privilege to teach.

That in consequence of this monopoly, all students who intend to take degrees in medicine are compelled to attend the classes of the University, even in the case which may possibly occur, when that attendance can only be regarded as a misspending of time. The Professors are thus secluded from all competition, and deprived of most powerful motives which might stimulate them to exertion. The hurtful consequences of such a system to the rising generation of medical men, to medical science, to the city of Glasgow, to the public at large, and even to the University, by which the system is enforced, are too obvious to require commentary.

That the admission of the certificates of teachers in London and Dublin, while the certificates of your Petitioners are rejected, is at once invidious and unjust. A privilege is thus given by the Principal and Professors to total strangers, which is denied to teachers in this city, most of whom are their own *alumni*, and whose qualifications to teach they can easily ascertain. Nor is it from any distrust of the qualifications of your Petitioners that this privilege is withheld, seeing that any of them would at once receive it, on shifting his abode to London or Dublin.

That the concession made to the teachers in London and Dublin seems to proceed from the desire of increasing the number of those who take degrees from the University. To the same motive must be referred the extraordinary course which the Principal and Professors have adopted, inasmuch as while all other Medical Boards throughout the kingdom have been raising the standard of qualification in the medical student, the members of the University of Glasgow have lowered the standard which they require.

With respect to lowering the standard of qualification for University honours, your Petitioners further beg to remark, that it operates as an inducement to the student to desert the benches of the private teachers, who conscientiously adhere to the higher standard, and repair to the University, where they receive an easier but much less complete education.

That the University of Glasgow has for some years past assumed a power which no other University in this country ever before pretended to, that of granting licenses to practise surgery. Your Petitioners hope that the royal visitors about to be appointed, will subject to a rigid scrutiny the grounds on which that power has been assumed; but in the meantime your Petitioners merely beg to request attention to the circumstance that the Principal and Professors of the University have extended to the education required for licenses in surgery, the same monopoly which they had previously assumed with respect to degrees in medicine, and your Petitioners cannot but add that the injustice of thus again refusing their certificates is the more glaring, as these certificates are recognised by every other Corporation in the kingdom, that confers licences to practise surgery.

Last of all, and chiefly, your Petitioners would beg to call the attention of your Right Honourable House to the circumstance, that a monopoly in teaching does not differ from a monopoly in any other branch of trade. With respect to the latter, it is well known that the profits of the monopolist are paid out of the pockets of those engaged in competing with him in that branch of trade to which his monopoly relates. On the very same principles, it is demonstrable that the whole profits which the Professors of the University derive from their monopoly are paid solely by your Petitioners, and by the other private teachers in this city.

On these grounds, your Petitioners earnestly pray that it may please your Right Honourable House to direct the Royal Visiters about to be appointed, not merely to confine their attention to the alterations and Improvements suggeste in the Reports of the University Commissioners, but to remedy whatever abuses may be found upon due inquiry to exist in the constitution and usages of the Universities, and, more especially, to make provision that the support which

Government may henceforward vouchsafe to give to the Universities may be given by means of endowments, which are paid by the nation at large, and not by means of monopolies, of which the burden falls solely upon a few individuals, and which constitute a species of tax, which is universally acknowle lged to be unjust in its principles, and which, in the present case, can also be shown to be ruinous to learning in its consequences.

And your Petitioners shall ever pray.

(Signed)

Robert Hunter, M.D., Professor of Anatomy and Physiology.
Alexander J. Hannay, M. D., Professor of the Theory and Practice of Physic.
Andrew Buchanan, M.D., Professor of Materia Medica.
Thomas Graham, Professor of Chemistry.
James Brown, M.D., Professor of Midwifery.
George Watt, Professor of Medical Jurisprudence.

DISMISSAL OF BARON LARREY.

The celebrated Baron Larrey, Senior Surgeon to the Army, and who for thirty years was at the head of the Field Hospitals of the French Army in all parts of Europe, and declared by Napoleon to be "the honestest man he ever knew," has been most unceremoniously dismissed from his post of Surgeon-in-Chief of the Invalids. The ground of removal is alleged to have been Court intrigue, which was all powerful under Marshall Maison, as Minister of War, who gave this honorable situation to M. Pasquier, not the baron of that name, the whole of whose services consist in having accompanied the Duke of Orleans as *private* Surgeon during his two short campaigns.

NEW MINERAL SPRING.

A new Mineral Spring has been lately discovered at Rosheim, between Strasbourg and Schelesbad, which is particularly interesting, from its containing principles never before found in any mineral water; viz. sulphate and carbonate of lithine.

Journal of Ophthalmology, to be Edited by Richard Middlemore, M.R.C.S., Surgeon to the Birmingham Eye Infirmary.

It affords us gratification to place before our readers the prospectus of a new periodical which can not fail to be productive of interest and instruction.

"In attempting to originate a Journal devoted exclusively to the consideration of the Anatomy, Physiology, and Pathology of the Eye and its Appendages, the Editor deems it necessary to explain, not merely the objects and scope of the work, but also the circumstances which have induced him to engage in its establishment.

"The textures which enter into the composition of the organ of vision are numerous, and for the most part very dissimilar to each other in their anatomical characters; some of them having a close analogy to other textures of the same generic name, which assist in forming different organs in various parts of the body; while two, at least, of its structures are so far peculiar, that they possess no strict resemblance to any other with which the anatomist is familiar. Hence it happens that, although the visual organ is minute in size, its diseases are, like its component parts, numerous; and the calamitous result of many of them proves that they are also most important: while some of them are scarcely at all understood. These facts are mentioned to point out the necessity for securing that special attention to it maladies, with a view to their more complete elucidation, which is to be attained by the establishment of a Journal having their investigation for its sole object. Again, many interesting facts relating to Ophthalmic literature are developed at occasional intervals in the various Medical Journals, but in so isolated and scattered a manner that it is scarcely in the power of any compiler, however judicious and diligent, or any reader, however industrious, to aggregate even a moderate part of them into a conveniently accessible form. It is presumed, therefore, that a Journal which shall be a depository of new and useful information in respect to the present and advancing state of Ophthalmic science, both at home and abroad, will be not less convenient for the occasional reference of the occupied practical surgeon than valuable to the zealously studious and scientific medical reader.

"The Editor is solicitous to state, that he is not endeavouring to institute this Journal from any motive of general gain, —he is endeavouring to institute it because, in the prosecution of his own researches, he has experienced the want of a publication of this nature; and because he believes that its establishment will greatly tend to elevate the character of

Ophthalmic science in England, and place it in that advanced position which every lover of the medical profession must wish it to attain. If the announcement of this Journal excite the expected degree of attention, the Editor's plans are so far matured that the first number will appear in January next; but, if otherwise, he will perfer to delay the accomplishment of his design, rather than hazard its eventual prosperity by making an abortive attempt to carry it into immediate execution. The Editor would further remark, that should he be placed in a condition to realize the plan he has now suggested, no outlay of time, no expenditure of labour, no justifiable sacrifice of private engagements, which a devotedness to the service in which he has embarked can prompt, shall be omitted to render the work useful and interesting, and to establish and maintain its claims to permanent professional support.

"It is intended that two numbers of the Journal shall be published annually, and that each number shall consist of original articles, with translations of important or new matter contained in the Italian, German, French, and other foreign periodicals; and, also, critical notices of all new works connected with Ophthalmic science.

"The Editor will be obliged if those gentlemen who feel desirous of promoting the success of the work will favour him with their views and opinions respecting it."

Philosophiæ, Medicinæ et Chirurgiæ Doctoris Aseanii Sobrero Dissertationes. Anno 1835. Augustus Taurinorum ex regiâ typographia.

Dissertations on the Anatomy, Physiology, and Inflammation of the Nerves. By Dr. Sobrero.

To the practical physician there is no department of anatomy of more importance than the nervous system, whether we consider its wide extent, its manifold and intricate cennexions, or whether we view it as the organ of intelligence, sensation, and motion. With the truth of this anatomists and physiologists seem to be fully impressed; yet, strange to say, notwithstanding all that has been written for the last forty years on this system, notwithstanding the numberless experiments and vivisections, of which it has been the subject, notwithstanding all the facts collected and experiments instituted by Bell and Magendie, Le Gallois and W. Philip, its study is now probably not more advanced than was that of the circulating system before Harvey's discovery. We possess, no doubt, a great number of physiological and pathological facts, which throw light on some points of this study; but these facts are, as far as we know, isolated and unconnected; we want some one grand, general fact under which to range and classify all those particular facts; we want, in a word, to be able to apply the Baconian method of induction to this department, shall we say of science? We apprehend that our present acquaintance with this system is not deserving of the name of science. These thoughts suggested themselves to us on perusing the work of Dr. Sobrero, which presents rather a fair resumé of the present state of our knowledge of this system.

The general anatomy of the nerves occupies an important place in this work; the most recent discoveries are contained in it, as for instance the researches of Professor Panizza, who has discovered that the two nervous filaments which were looked on as destined to establish a communication between the superior curvical ganglion and the ninth pair, do not form a real anastomosis, since he has been able by a tedious and minute dissection (still preserving them entire) to detach them completely from this nerve, around which they merely make a turn, as also the researches of the same anatomist, and of Professor Demichelis, who have proved, as Scarpa had already said, that each of the two roots of the spinal nerves sends a particular root to the intercostal nerve.

The second part is entirely devoted to the consideration of the functions of the nerves; we wish we could follow our author in some of his discussions on this subject; but how are we to analyse that which is already a succinct analysis of all that is known on this subject.

Neuritis forms the subject of the third part. The authorities and facts are numerous on this point, and certainly our author has not been sparing of them. Still, notwithstanding all the facts we possess on this matter, we have strong doubts with respect to a number of points connected with neuritis, and that arises from the fact, that the pathology of the nerves is much less advanced than their anatomy and physiology. Even the anatomical character of neuritis are not yet well established, and the symptoms are far from having attained that certainty which we find in other parts of pathology. Dr. Sobrero seems disposed to attribute

many of those diseases which we consider neuralgic to inflammation of the nerves. We shall say nothing more of this work than that its perusal will amply repay the physiologist, and more particularly the pathologist, as it contains most of the facts scattered through the various modern works on these important branches of medical science.

Report upon the Existing System of Public Medical Relief in Ireland, addressed to his Majesty's Commissioners of Inquiry into the Condition of the Poor in Ireland. By the late Sir David Barry, M.D., F.R.S., Deputy Inspector General of Hospitals, &c., and J. R. Corrie, M.D., Cantab., F.G.S., Assistant Medical Commissioners. *To which is added a Letter to the Right Hon. Viscount Morpeth, M.P., Chief Secretary for Ireland, on the District Lunatic Asylums.* London: 1836. R. Groombridge.

The following Report, which has just issued from the press, contains a graphic account of Medical jobbing in Ireland, and will be perused with interest by all philanthropists. It appeared among the Parliamentary papers some time ago, and as these are inaccessible to the majority of the profession, Dr. Corrie determined on placing it in a distinct form before his brethren.

"The Reports of the Medical Assistant Commissioners of Irish Poor Inquiry, as printed in the large Parliamentary folios, are not very generally accessible; I have therefore resolved to publish, in the form of a small pamphlet, that drawn up by the late Sir David Barry and myself.

"Of its deficiencies and imperfections I am very sensible, and deeply regret that in its final revision I could not have the aid of my able and lamented friend and colleague.

"We have recorded what appeared to us to be errors and abuses in the management of the Institutions we visited, and have ventured to recommend an entire alteration of the system; and the best way to ascertain the soundness of our views is to give them the greatest possible publicity.

"The manner of conducting the inquiry, and of collecting the information, is described at the commencement of the Report itself; there is no occasion, therefore, for any explanations here. If our remarks appear brief and incomplete, it must be recollected that they were written under the supposition that the special reports which we sent in, on every Institution we visited, would be in the hands of the reader. I will merely add, that the Report, as I now publish it, is similar to the one sent to the Board of Commissioners of Irish Poor Inquiry, and printed in Appendix B, with the omission of the extracts from our special reports and references to them. When, in our official report, we noticed cases of mismanagement, it was obligatory on us to convey to the Board full and precise statements of the circumstances; but as it is the abuse in question, and not the place and person connected with it, that is really of importance, I have omitted these references. If any of my readers, however, are not satisfied they can examine the Reports as printed by authority of Parliament.

"I avail myself of this opportunity of expressing deep regret that it was ever our duty to make any remarks of the kind, and to assure all the gentlemen connected with the charities we visited, that if we 'nothing extenuated,' we most certainly have 'set down nought in malice.' As we were entirely unacquainted with any of the medical officers we met, I trust we shall have credit for strict impartiality. Moreover, the instances of mismanagement form the exceptions; good conduct and great attention to the poor patients, the rule.

"It may be thought that statistical tables, both medical and financial, should be attached to this Report; but such were already in the hands of the Chief Commissioners and before the public, besides we only visited a small part of Ireland, and all our statements are made on our own personal knowledge.

"The expense of medicine has been calculated whenever we thought we had obtained the requisite data, as is likewise the total expense per annum of one bed in an hospital, from which the cost of a complete system of medical relief for the poor of the whole kingdom may be easily deduced, whenever it shall be determined what number of beds ought to be allotted to a given population.

"We have omitted all notice of the question, whether public medical relief to the sick poor is or is not advisable; whether it is or is not open to objections in principle the same as those urged against the late English Poor Law System. Such inquiries did not appear to us to form any part of our duty. I shall, however, consider the question in a note to a

translation of Count Duchâtel's* work on Charity, which I hope to submit to the English public in the course of a few months."

We are next favoured with remarks on the manner in which the inspection was conducted, and an account of institutions which were examined. Many of the corruptionists in the sister kingdom threw every difficulty in the way of the laudable exertions of Mr. Phelan; but a government commission left them no alternative. A total change is about to be effected in the medical charities of Ireland, owing to the praiseworthy exertions and genuine humanity of Mr. Phelan. But let us follow the government commissioners.

"Previously to entering upon the more immediate business of our Report, we beg to submit a short statement as to the length of time employed by us in our investigation, the information collected, the mode of proceeding adopted in collecting that information; the situation, number, and classes of institutions examined.

"We have employed five months, without any intermission, in examining together, and on the spot, the establishments existing in the North-eastern Counties, and in some of those of the West and South, for the relief of the sick and impotent poor. Our joint remarks upon these establishments were sent in to the Board as we completed our examination of each respectively. We moreover appended to each Local Report at the time a short *resumé* of the leading facts connected with each, as well as our own conclusions, founded upon oral and documentary evidence, but more especially upon actual observation.

"Manner of Conducting the Examination.—The Government, in selecting medical men to investigate the working of medical charities, the only species of public relief ever afforded to the poor of this country, seems to have justly appreciated the difficulties with which the subject is surrounded. The very materials given to the sick poor as relief at these institutions; the proper mode of purchasing, preparing, and preserving these materials; the professional fitness or unfitness of individuals to be entrusted with the administration of these materials; the very accounting for their expenditure, can be thoroughly understood by medical men alone. It is clear, then, that what is termed *Evidence*, or a mere record of the answers of casual persons, to set questions, however frequently repeated, can give but very inadequate notions, indeed, of the actual management of such complicated charities, in which technical knowledge might be so easily employed to justify abuse, or cover misrepresentation.

"In order to obtain as comprehensive a view as possible of the actual circumstances of individual charities, and of the estimation in which they were held by their respective communities, as well as to obviate all pretext for withholding information on the plea of not having had timely notice, we invariably addressed letters to each institution some days previously to that fixed for our official visit. By these letters we endeavoured to obtain as full a meeting as could be procured of those likely to possess the knowledge we sought; and the returns called for by these letters, when checked and compared with the records of the establishment, opened a plan of investigation not easily frustrated.

"The method which we adopted in our examination of these charities, was the following:—

"We always carried with us to each institution a note-book, containing printed memoranda, arranged in the margins of blank sheets, under such general heads as were thought to include all the more important points of every species of medical charity. This note-book had been prepared from written contributions, furnished by two of the medical Assistant Commissioners, and from all the most respectable sources of information accessible to the Board.

"The medicines, medical stores, and the wards, with the intern patients, if there were any, were first examined, notes being taken of every thing worthy of remark. One of us then sat down, asked the series of questions suggested by the memoranda, and recorded the replies most approved of by the whole or the majority of those present; whilst the other took private notes of such local circumstances as appeared to merit notice, or happened to be peculiar to the establishment under consideration. The registers, accounts, and other written documents were examined with the proper officers. Our joint notes were afterwards revised, and a *resumé* added from the notes, under the head of '*General Ob-*

* De la Charité dans ses rapports avec l'etate moral et le bienetre des classes inferieures de la Societé, par M. T. Duclâtel. Paris, 1829.

servations.' A note-book thus filled up, constituted an individual local Report, and was forthwith forwarded to the Board in Dublin.

"The length of time employed in each of these examinations, independently of the subsequent revision of our notes, was from two and a half to four hours.

"Purely medical charities we considered to be more directly within our sphere; but we also *incidentally* looked into houses of industry, mendicity establishments, and gaols, as likely to afford information illustrative of the line of inquiry which we were pursuing.

"We had determined from the beginning that the chief object to be attained by our mission was not so much sanitary or statistic information, as a faithful picture of the actual state and working of a certain proportion of the medical charities; such a picture as might enable the Government to judge of the necessity for legislative interference in their present management.

"The classes of institutions, and the number of each class examined by us, during the above period, were—

County and City Hospitals	15
Dispensaries	102
Fever Hospitals	16
Lunatic Asylums	7
Cholera Hospitals	2
Lying-in Hospitals	2
Houses of Industry & Mendicity	12
Gaols	10
Total	166

"Analysis of Report.—Having premised these few observations, we shall next venture to point out some of the defects of the original enactments relating to public Medical Charities, and also some examples of the more flagrant abuses which, under the administration of the enactments alluded to, have crept into these charities; referring for more detailed illustrations to our specific local Reports, and the extracts attached to this Report.

"Lastly, we shall take the liberty of submitting our own views, as to the measures most likely, in our opinion, to arrest abuse, and at the same time to render public medical charity more conducive than it is at present to its legitimate object—the relief of the sick and destitute poor.

"The leading defects, in our opinion, in the original construction and present state of the public medical relief system to the sick poor, may be traced to—

"1st. The total omission, on the part of the Legislature, of all provision for an efficient superintendence or control being exercised by properly qualified persons, whether over the working of the whole system, or over that of its subordinate machinery, such as county hospitals, dispensaries, fever hospitals, &c. in the different districts.

"2dly. The authorizing by law a sort of partnership in charity (unprotected, however, on one side by adequate security) between the public purse and private individuals; thereby placing it within the power of designing persons, under the various Dispensary* and Fever Hospital Acts, to impose a permanent tax upon local communities, professedly for the purpose of relieving the sick poor of the district, but in reality for their own or their friends' private advantage.

"3dly. The leaving it discretionary with grand juries, a species of local controlling bodies, which exist only during the presence of the judges of assize, to diminish or annihilate the funds of a charity capable perhaps of much usefulness; and that merely as a punishment for abuses, the ordinary offspring of irresponsibility, and want of superintendence.

"4thly. The exclusiveness of the County Infirmaries Act, relatively to the qualifications as well as to the number of physicians and surgeons to be employed in the hospitals, whilst the Dispensary Acts, on the contrary, require no proofs of specific medical qualifications of any kind, from the persons to whose care the sick poor applying at the latter class of institutions are to be consigned.

"Under such an easy system of legislation, and a still more lax administration of its enactments, it is not to be wondered at, that abuses arose, nor that these abuses all tended directly, or indirectly, to divert

* "Public Dispensaries in Ireland are considered by the law to derive their funds from two sources; first, annual private subscriptions by individuals, whether connected or not with the locality; secondly, from county assessments, authorized by the respective local grand juries, for an amount to each dispensary equal to the sum of the annual private subscriptions respectively, upon the list of subscribers being vouched for as *bona fide* contributors to the respective charities at the assizes, in a manner satisfactory to the grand jury. The amount of the county assessment *must* be at least double that of the private subscription list, if there be a fever hospital united with the dispensary."

to selfish purposes a greater or less portion of the means originally destined for the relief of the sick poor."

Let us now hear the Report of medical jobbing in county and city hospitals and dispensaries. The same system is often adopted in our English charities—we need not mention examples.

"COUNTY AND CITY HOSPITALS.—The following, amongst others, are some of the abuses which we had occasion to observe in the management of this class:

"1. The chief medical officer becomes the contractor to his own hospital for a particular article of diet, the consumption of which he can himself increase *ad libitum*. The Dietary is constructed so as to favour that consumption.

"2. He becomes possessed of, and turns to his own private profit, all the land, sometimes of considerable extent, attached to the charity.

"3. He occupies the best part of the hospital, and its out-buildings with his family, to the manifest prejudice of the sick poor.

"4. He establishes a dispensary within the hospital, and receives under that pretext an additional salary for seeing extern patients in the hospital surgery.

"5. He charges for additional medicine for his dispensary, but does not keep that medicine apart from the hospital medicine.

"6. He keeps no daily diet table, nor accounts of provisions issued.

"7. He is himself the purchaser of all provisions.

"8. He builds for his own accommodation on the hospital premises.

"9. He takes in such cases as are least entitled to hospital relief, and are likely to be a burthen to the institution.

"10. He knows little or nothing of the rate or quality of diet, or of the provisions bought or issued at his own hospital; seldom investigates that particular department, which he leaves chiefly to the care of his purveyor and matron.

"The extreme unpleasantness of the ungracious but unavoidable task of denouncing particular local abuses, we feel to be much diminished by our being able to refer to a large proportion of examples of this class, in which the zeal, high integrity and attention, not only of their medical officers, but of all concerned in their administration, are entitled to the highest praise. We refer, therefore, with much pleasure to our Reports and Extracts on the infirmaries of the counties of Antrim, Londonderry, Cavan, Clare, Limerick, and Limerick City; to the Queen's County Infirmary, also, as admirably managed in every department, excepting that last mentioned; which, however, we feel quite sure was immediately and fully rectified by the very able medical officer at its head.

"DISPENSARIES.—1. A charity of this class to be got up, or if already got up, is to be supported.

"A list of subscribers to certain sums, amounting say to 100*l.* is laid before the grand jury, and accepted by that body as a lawful basis (under the Acts referred to) upon which to establish an additional tax upon the county (to an equivalent amount, if for this class alone; to double the amount of subscriptions, if for a charity combining this with a Fever Hospital), for the alleged relief of the sick poor of a particular district.

"Several of these subscribers may not be *bonâ fide* payers.

"May cease to pay after the first or second year.

"The names remain, the list is annually lald before the grand jury, and is approved, if there be a patronizing member, which is generally, if not always, the case.

"2. The amount of the nominal subscriptions is required to be sworn to, or lodged with a particular officer or authority.

"The medical attendant or his friends advance the sum required for the moment, and the local taxation for the charity goes on as before; or, the charity ceases to exist, if the nominal subscription be not sworn in time.

(To be continued).

RECEIVED FOR REVIEW.

A Treatise on Tetanus; being the Essay for which the Jacksonian Prize for the Year 1834 *was awarded by the Royal College of Surgeons in London.* By Thomas Blizard Curling, Assistant Surgeon to the London Hospital, and Lecturer on Morbid Anatomy. 8vo. pp. 239. London, 1836: Rivingtons and Highley.

TO CORRESPONDENTS.

Several communications have been received too late for this Number.

S. R. N.—There must be an indenture for five years, according to the Act of 1815.

THE

London Medical and Surgical Journal.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE IX.

Treatment of Strangulated Hernia when mortified.

When the protruded intestine is but partially mortified, rules somewhat different from those I have just mentioned are usually prescribed. Upon the value of the several plans suggested for our adoption, I cannot speak from experience, never having seen any of them put into practical execution. All most properly agree in the propriety of dilating the stricture wherever it may be situated; for unless this be done, the mortification will probably extend until the whole of the protrusion is involved, and you see this operation would then be necessary on the former principle. The difference in advice lies in the next proceeding. Some are advocates for passing a ligature through the mesentery, and then returning the parts in such a way as to retain them near to the dilated aperture. Others oppose the use of the ligature, as an unnecessary and dangerous expedient, while they recommend the replacement of the hernia in the condition in which it exists. Others again would excise the mortification, and subsequently treat the whole as an aggravated case of intestinal wound. I thought it right to mention in particular these three different proposals, because I have heard them more frequently spoken of than many others, which I might add, more remarkable indeed for the ingenuity displayed in the invention of them, than for their adaptation to the ends for which they are contrived. When a variety of plans are submitted to choice, we should be careful to make a selection from those whose application to the purposes of practical utility has not only been assayed, but fully proven. Upon these grounds, none of those specifically noticed or more generally alluded to, can be said to be entitled to adoption. Having pronounced their censure, I shall venture an advice, founded, as I conceive, on observation of the reparative efforts by which nature endeavours to secure, as it were, her own preservation. I have already remarked the important part performed by adhesion, but as I only adverted to the subject in a general manner, I feel it to be required by the purpose in my view, that I should enter a little more into detail. When a perfect loop of intestine is mortified, and the gangrened parts are separated, suppose I say at the aperture of protrusion, you must perceive the canals of the remaining parts of the intestines cannot correspond, for they lie parallel to each other; nor can the contents of the superior portion find their way into that which leads to the rectum, by any immediate communication. Yet the usual route is sometimes restored, and now our business is to ascertain the provisions made to accomplish so much comfort and security to life; that we may learn how to imitate nature in those cases in which natural operation may be interfered with or disturbed. Examination of the bodies of such persons as were cured of artificial anus, with great uniformity exhibits the appearances illustrated and made easily intelligible by the present preparation. It is an inguinal hernia. Viewed from the abdominal side, you see unequivocal evidence of preceding old inflammation. The peritonæum of the cavity, and of the mutilated intestine, are strongly incorporated, and the preternatural communi-

cation by which the finger would have been once conducted into an external situation, is now hermetically sealed. Viewed from without, that is, in the opposite direction, three chambers leading into one another are exposed. Two of these you obviously perceive are openings of the intestinal canal, while the third is interposed in such a way as answers the purposes of an apartment common to both the others, from the one of which it may be imagined to receive, and to the other of which it may also be imagined, to transmit its contents. In my mind, there is a strong resemblance between this appearance and the manner in which the ileum, colon, and cœcum are joined together. The analogy will be more plainly perceived if these be first inflated, than moderately dried, and the anterior third of the circumference sliced away. In this case the cœcum may be regarded as the third chamber receiving from the ileum and delivering to the colon. In the case of this healed specimen of a once artificial anus, the third or receptaculum part is wholly a new formation. I am far from the opinion, that is difficult to establish the truth of this proposition. I conceive the matter may be thus satisfactorily explained. I assume, I shall be borne out in the assertion, that hernial sacs are rarely full participations in the destructive changes, which we are assured their contents occasionally undergo. At first it may appear strange, as all are embraced by the same aperture of straightness, that any part of the protrusion should enjoy the degree of exemption which it appears the sac possesses. But, surprise will disappear, when we reflect on the difference of the containing and contained structures, on the different offices to which they are each assigned, and above all, on the different sources from which both receive their arterial supplies, and the different channels through which the various surplus of both is returned to the general circulation.

In the condition of a hernial sac, there is something almost parasitic, proved from its original relations; it lines, and placed in a foreign situation, it not only lines, but as far as we can judge, it performs all the functions for which the peritonæum was designed. Sacs, unlike the intestines, bring no particular vessels from the abdomical cavity. The highest compression may be exercised, and yet their arterial supply is not wholly cut off, nor are the routes for reflux circulation fully interrupted, in consequence of the various new fountains from which their nourishment is derived. Resisting vitality thus provided, defends from destruction, and prepares this part for those preservative changes to which it seems so essentially to contribute. The first intention of nature appears to be to secure the abdomen; and this end is accomplished by the adhesions we have now just seen between the intestinal peritonæum and the peritonæum of the general cavity, for I suppose you understand the established law, that adhesion, whenever, and wherever it takes place, puts an end to inflammation, the immediate cause by which adhesion has been produced. However external disease may now proceed, its influence will not involve the boundary which has been thus set up, while the sac thus walled out from the general cavity to which it once belonged, is separated to purposes convenient for the ends which nature has designed. The changes which the insulated sac undergoes, to suit it to its new office, I cannot presume to pronounce; but that serous membranes change their proper function, and become capable of secreting a fluid nearly allied to mucus, there is abundant reason to believe. This power of adaptation is here strongly displayed, for this excluded pouch now innocuously receives and transmits substances, which were they at one time applied to it, would have roused it into a state of dangerous inflammatory excitement. It may, therefore, be inferred, that this once serous membrane has lost its original organization, and that a new one is substituted for that which has been laid aside. The sac, in fact, to a certain extent, is now become a portion of the intestinal canal. Its original structure, the condition of its extra abdominal existence, and its subsequent insulation seem to have suited it to this purpose. I think, it may well be doubted, whether was the sac wholly removed by mortification or design, we would ever have the opportunity, now possessed of viewing a preparation, which, I presume to think, stamps with the character of illustrative truth every position I have endeavoured to maintain.

The pouch here formed often bears but a small proportion to the sac, to which it once seems to have belonged; so we are compelled to admit, that the portion which disappeared has been removed by the previous sloughing, or in consequence of a known power by which tubes and cavities are diminished, or even finally obliterated, whenever they are deprived

of the stimulus which preserved their distension, whether natural or acquired. However, we may explain this succedaneous formation, we are certain it is one which slowly arrives at complete perfection. The fæces are for a varying period of considerable duration, discharged through a fistulous passage, which increases in length and narrowness in proportion to the degree in which this pouch advances to what I shall call its finished development. The final closure takes place by a progression from without inwards, that is, from the outlet of the stercoracious fistula to the other extremity, which ends at the intestine. Whatever be the extent of this canal, like all fistulæ, wherever situate, its shape is funnel-like; the base being always disposed at that part from which it is supplied with the substance it is provided to discharge. In its course through external structures, it is lined by the ordinary callus, but round its bottom you see a membrane laid, which close inspection cannot fail to convince you is peritonæum, and was most probably the neck of a sac, whose greater part was destroyed by the preceding disease. How far what I have called the receptaculum pouch may be said to hold a certain relation to the abdominal contents, it is not in my power to state, from the limited experience I have acquired. But here, in this inguinal specimen, it appears to lie within the abdomen, and of course occupies a higher situation than the seat of the stricture. I have seen but a solitary case of artificial anus, that of a Mr. Shannon, long since dead, in which there was more than one external opening, and in that instance there were several. Some of these occasionally dried up, while new fistulæ formed; and here, I presume, they all communicated with one and the same stercoraceous cavity.

This subject has carried me farther than I had originally intended; and it may be feared you have lost sight, in the digression, of the practical point it was designed to enforce. My object was to show reasons for the rules I delivered as guides in the treatment of certain cases of sloughed intestine; and I dare to hope, by setting before you the manner in which nature makes amends for the loss she has sustained, you will see the propriety of not interfering with those preparatory measures which she proposes to pursue for the purpose she aims to accomplish. I repeat, divide the stricture and leave nature to her own local resources. Assist her to the utmost, but, I beseech you, not to disturb her. The finger's curiosity must not explore; the finger's ill-judged interference must not reduce. In the one case, death is inevitable; in the other case, it bids fair to be so. The intentional and yet cruel poking, which I have seen in many hernial operations, shall yet be the subject of a reprimand, for which, even now, I anticipate your informed sanction. But, in the consequences of which I now suppose myself to speak, indulgence, which cannot be too much blamed, is an interference which nature refuses to bear; it is an injury which I sincerely trust you will be too merciful to inflict.

Another important scene is reserved, in which we are sometimes, although rarely, called to act. A person has been treated with every exercise of experienced judgment; the commands of skill have been resisted, and the cries of sympathising humanity are set at nought; science brings no effectual relief, remedies no alleviation; and yet a period of some mitigation comes;—hope, for a short season, is diffused to all. But the victim to distrust in our power, and to the dread of those means which alone can be employed to rescue him from dangers, is not merely reconciled to ask for, but he is most anxious to receive the benefit of those means which he at first feared and rejected. He feels—what is perceived by any dying man, unless insensible from coma or deceived by delirium—the premonitions of a change at which we shudder, and which few, alas! are deliberately prepared to meet. A moment since he trembled at contemplated pain, now he is apalled by death, and courts the suffering he refused to bear, at a period when submission is a dying grasp, and operation the straw on which he aims to catch. But he is now bathed in a sweat which even the ignorant cannot mistake. The pulse rapid and tremulous, a feather's weight compressing it to obliteration; the countenance is sunken; the stomach sick; the belly tympanitic; the bowels constipated or freely purging; singultus, constant oppression, perhaps insensibility, indicate the cheerless chasm which seperates us from hope; gangrene has seized upon the rupture, and topical appearances confirm the general indications. Even in circumstances so well calculated to sink us in despair, I am almost unwilling to encourage you to abandon your fellow man. God, in his merciful dealing with his creatures, may even now avert that

impending stroke, and direct our only remaining means to be the instruments of his interposition. One ray of hope thus gleams through the gloom of natural despondency, dictates our last proceeding, and supports us under those trials to which we are often exposed in the performance of professional duty. Now, the mortified parts are to be freely incised, that fæces, air, and putrescent fluids may be allowed to escape. At present they require no other attentions than such as cleanliness enjoins. The parting powers of life are to be cherished by stimuli proportioned to existing necessity, and we endeavour to allay irritability of the stomach by moderate doses of opium, whose effects are often most certain when administered by the rectum. All purgative remedies must be avoided, and nourishment must be given with the nicest caution. If life endures, these attentions are to be continued for a few days, while the sloughing parts may be treated with slightly stimulant applications, so managed as not to give uneasiness, or to obstruct discharges, for which sufficient liberty of escape is always to be provided.

It may be your lot, as it has been mine, to visit where every thing portends a speedy dissolution: the pulse is scarcely perceptible, the extremities are cold, the respiration is quick and short, the face is sunken, the eye is stupid, and the gum of death bedims its lustre. All is irrecoverably lost: and with this feeling we withdraw from a chamber where our presence cannot be of any service.

Before I conclude the subject of acute inflammatory strangulation, I desire to make a few observations with respect to the manner in which the omentum may be concerned in the disease. I believe it to be seldom strangulated alone; intestine may be protruded without omentum, as you can be convinced by a reference to my museum; but the collection does not afford an example of a descent of the latter unaccompanied by the former. In practice, I have never seen a case which does not confirm the opinion I have just expressed.

The omentum seems to resist the effects of stricture longer than the intestine. I have sometimes been much surprised to find it but little changed from its natural appearance, while the gut exhibited doubtless evidence of even more than a serious degree of congestion. We estimate the extent to which it is concerned, in recent cases at least, by the amount of its vascularity, and the deepness of its lividity. In some instances, we see the turgid veins ramifying on its surface; in others, we see occasional patches of extravasated blood, between which we can distinguish the natural structure; and, again, we find it of a deep and more extensively ecchymosed appearance. In the first case, it bleeds when cut; in the last, the incision is bloodless. It has sometimes presented a greenish or a livid hue. On what these different shades depend it is not easy to say, but I have always regarded these as marks of mortification. Mere congestion or inflammation of the omentum does not preclude reduction, which is to be accomplished under an observance of the few following cautions. As this part contains neither fæces nor fluid, there is no necessity for any emptying pressure, but force must be used to reconvey it into the abdomen, and must be applied to part after part, until the whole be assuredly lodged in its proper cavity. This is often easily effected, especially when the quantity is not much, and the dilatation of the stricture is sufficient. However, there are occasions when more difficulty is experienced, and you may meet with a delay on which you have not learned to calculate. This may happen when the protrusion is considerable, or the membrane is the seat of unusual adipose deposition. Here there may be a great disproportion between the bulk to be returned and the aperture through which it is to repass. The fingers of both hands must now be employed in a patient kneading effort, one set, as it were, delivering to the abdomen, and maintaining in its place what it has delivered, while the other set furnishes the former with successively new portions upon which their proper action is, in due order, to be directed. During the whole proceeding, I say, gentleness should be used. I remember a case treated in a harsh and hurried manner; death took place in twenty-four hours after operation, and it was found that reduction had not been accomplished.

The efforts used were sufficiently violent, or otherwise so injudiciously managed, that the peritonæum was absolutely forced from its abdominal attachments, and the omentum was lodged between the bladder and the pubis, the cellular connection uniting these parts being of course widely destroyed. Very nearly a similar result followed where the operator, finding himself opposed in the return of the omentum, introduced his finger with a wedge-like power into the opening, previously dilated with the bis-

toury. This, perhaps proper attempt, adding no facility to his designs, the knife was a second time called to his assistance. A further and a most free enlargement followed. And now you can judge of the position in which he stood, when I inform you, that the provision made for a convenient reduction, gave unexpected room for increased visceral descent, and thus embarrassments accumulated by the identical means devised to obviate the difficulties which already existed. Where calm and steady council should preside, confusion appeared to rule—multitudinous judgment was distracted. While each gave advice, no two opinions agreed upon the measure to be pursued. The operator was in dismay. He was overcome by an emergency with which he was not prepared to contend. He dreads the charge of an ineffectual operation. To prove its adequacy to the ends of reduction, he hurries the omentum out of sight; the finger is introduced through the opening he established; its rotatory movement is to him satisfactory. Many similar criterion trials are instituted, and each arrives at the conclusion that all is right.—Speedy death proves the converse of the certainty, for the omentum was not replaced within the peritonæum. Success engenders confidence to which we often dangerously aspire. Miscarriage, faithfully narrated, chastens this injurious, overweening reliance, and erects a memorial from which boldness may learn prudence, and forward hurry the advantage of that careful circumspection in which, as much as in anything beside, I am desirous to instruct you.

You now know that the intestine, as may be said, returns by a snap into its proper residence. It is not so with the omentum. This must be followed to the last by the finger, which alone can pronounce the certainty that it has regained a natural situation.

Suddenly strangulated and acutely inflamed intestinal protrusions sometimes are found amidst a mass of omentum a long time descended, and in a variety of ways altered from a natural condition. With such cases I have had operatively to deal, and I have at first often found it difficult to decide by manual examination as to the precise nature of the contents, or the proportions in which they existed. I many times approached much nearer to this knowledge by an attention to general, rather than to local symptoms, always inferring whenever, in chronic herniæ, the former became suddenly acute and rapidly increased, that intestine was sure to be involved. When nothing but large masses of irregularly woven and nodulated omentum appeared, I have searched for intestine, even when my intelligent assistants thought my scrutiny uncalled for; but perseverance ultimately disclosed the facts, and the judgment I ventured to express was confirmed. I shall here briefly notice one case which strengthens what I have advanced, and at the same time may be in some measure allowed to establish another point of no mean practical importance. Since my last lectures on this subject, I operated on Mrs. R. of Barrack Street. She was an exceedingly corpulent person, about forty years of age. An umbilical hernia had existed for ten years, and had finally equalled the size of a newly-born infant's head. From this disease she frequently suffered many inconveniences; she had periods of abdominal distress, sickness, vomiting, tenderness, constipation, feverishness, and local pain. By repose, abstinence, and aperient treatment these symptoms usually disappeared. On the then occasion, her former symptoms returned with unusual severity. The accustomed means of relief were ineffectually tried, and then my attendance was required. The fruitlessness of all which had been done, seconded by arguments in favour of a speedy operation, and in spite of the prejudices of her friends, it was so determined that both should prevail. An enormous mass of the omentum was exposed, and patchy spots of vascularity were here and there displayed upon its surface. These were few, while a great extent of structure bore all the characters of adipose hypertrophy. Looking through every external mesh formed by fringes, and the adhesion they contained, it was clear that vascular turgesence was confined to the presenting surface. Reduction was made impossible, from the incorporation of the containing and the contents, so that it was ruled in conference with the professional friends who assisted me, that the stricture should be dilated, and that operative art should no further interfere. To that extent the precept was obeyed. The stricture, as far as the finger could discover it, was removed; but I was not satisfied, because the appearance before my eyes did not seem to me to be adequate to account for the rapidity and intenseness of symptoms which lead us to engage in an operation believed to be indispensible, and which every one present knew fully to be one of mo-

mentous importance. Before I would consent to close the wound, I pressed the omental mass between my opposed fingers, buried as far as they could pass, until the tumour was examined to my full satisfaction. I thought I felt an elastic bulk at a considerable depth, and at the root of the tumour. My suspicions were confirmed by the inclining testimony of my professional friends, delivered after careful examination. The question now came to this—What procedure is justifiable in this seeming certainty, and in this positive uncertainty? To reach the seat of presumed intestinal structure, the omentum must be divided. Such an operation may well be considered hazardous, and such it would be in any other circumstances than those in which it was now performed; for here we may fairly consider the omentum as a structure much altered in its nature, situate within our reach, and in a great measure manageable by the resources we usually bring to bear in bleeding external wounds. I proceeded by dividing every band of adhesion which lay in the way, having first passed the director beneath it; when it was necessary to incise the omentum as far as was practicable, I selected those parts where the membrane was least loaded with fat, remembering that in such situations there was the least likelihood of meeting with the larger epiploic arteries, which you no doubt fully understand it is quite desirable to avoid. To give further security to every movement of the knife, I embraced between my finger and thumb every packet I intended to cut, and I carefully examined for arterial pulsation. By observing this caution, I sometimes changed my ground with no little advantage, and by shifting a little aside, I was able to accomplish all my purposes, without encountering any confusing hemorrhage. The broad, well-curved hooks, or plates, so useful in deep operations, were most conveniently applied by Messrs. Gregory and Moorhead, so that annoyance from the falling in of the flaccid walls of the wound was well obviated, and its bottom was always satisfactorily exposed.

By such steps as I have detailed, a portion of highly congested intestine was ultimately brought into view. It was as large as a full sized walnut, and it was tightly bound round by a callus of unexpected firmness, which it was impossible to expose, so far as the touch could discover; the gut had escaped through a different opening from that by which the omentum protruded. The aperture lying in the linea alba, and the resistance of the stricture being believed to be formed by something else rather than omentum, there was no hesitation about its division. This was effected according to general rules, already delivered to you so fully, I feel I have no additional remark to make which could deserve your notice. I shall therefore close my account of this interesting case by informing you, that the local and general attentions prescribed in a former lecture at length, conducted the subject of it to a happy issue out of her existing afflictions.

I have found the intestine acutely and suddenly strangulated by one of the mesh-like openings produced by the adherent fimbriæ of the omentum. I operated on one case in which the stricture was caused by an hour-glass contraction of this membrane, seemingly formed by an adhesion between the edges of the protruded portion of this membrane established in the abdomen previous to the descent, or in the sac, subsequent to that period. These, no doubt, are rare occurrences, for I possess but one specimen of each. As I shall find it necessary to refer to these on another occasion, I shall now only observe, where you meet with this state of things, your practice should be regulated by the advice to be deduced from the case of mixed umbilical hernia, so amply and so lately set before you in improving detail.

The omentum may be the cause of strangulation, although it does not make up any part of the contents of the sac. I adduce the following outline of a case in support of this remarkable proposition. I operated on an unusually large femoral hernia, observe, of the left side, and under circumstances which I conceived to be very favourable to success. I set loose the bands on which stricture appeared to depend, and I returned the intestine to my own satisfaction, as well as to the satisfaction of my immediate assistants. The symptoms of strangulation continued, and the disease proceeded in its usual course for three days, when the patient expired. On examination I found that what I may name the primary stricture remained, and that it was formed by a slender, tense, fibrous chord of omentum, broadly and finally attached to the peritonæum, external to the femoral vessels, and as intimately, although more narrowly, fixed within the pubic brim of the pelvis. Behind this band the intestine lay, and up to this line it was deeply

discoloured. The nature of my error, if such a term be deserved, now became apparent. In fact, the external protrusion was returned into the cavity of the abdomen, but being passed in front of this omental string, the disease remained, and the consequences were fatal. In this case, gentlemen, I cannot but think we failed in circumspection, and the more I have reflected on the subject, the more I feel disposed to acquiesce in a charge which might be raised against us. I do think, had the finger been fully introduced, and had it carefully scrutinised the parts within its reach, the tense intestine would have been detected, the cause of restraint would probably have been discovered, and thus a light might have been thrown upon the obscure and complicated business, in which the circumstances I have mentioned to you, plainly evinces we were engaged.

Proposals for the treatment of mortified omentum are to be found in the books usually in your hands, I will therefore withhold enumeration, and proceed to the close of this lecture by a few observations on their application, and the claim they should be allowed to have upon your adoption.

The omentum being dead as far as the opening of escape, a condition however in which it is seldom found to be, and the stricture having been gently removed, I would remove the slough, and thus a view is exactly accordant with the principles by which our conduct is governed in every case of external mortification. I would certainly remove the gangrened parts, without in any avoidable way giving disturbance to the living parts. Thus, I think the sac is relieved from an incumbrance, and from a noxious power. Thus much being done, I would most confidingly commit the rest to the hand of nature, and interfering only to the extent she indicated, I would with anxiety avoid her pointing, with humility arising from distrust in my own agency, I would endeavour to follow in the path to which her intelligence directed me. Rest of a part, and repose of the whole frame, are the dictates she prescribes. For these there is no substitute. From the manner in which your profession is written of and talked of, you can scarcely resist the conclusion, that every thing is to be accomplished by the interposition of our imperfect art. If you lay yourselves out to gather wisdom, years and experience will instruct you in a widely different lesson, and you will then have learned the value of this important maxim, that the highest exercise of our knowledge is never more prominently displayed, than when, recollecting there is a time for all things, we are so fortunate as to catch the season in which action is not ill placed, and forbearance not only is irreprehensible, but deserving the best rewards of praise. The immediate danger arising from debility, already a deep injury has been sustained, and a painful operation seems in an additional degree to have reduced the strength of the patient. A cordial treatment may, therefore, for a short time be required. Irritability of stomach is to be allayed, and thirst should be alleviated by means to which I need not again direct your particular attention. As there is no presumed engagement of the intestine, suitable aperients may be administered as soon as the stomach promises to retain them. Violent drastics are to be avoided, while pain and tension of the abdomen must be met by means to be chosen, combined, proportioned, and timed, according to the demands of each individual case.

When the omentum is but partially mortified, it certainly would be wrong to return it into the cavity of the abdomen, even with all the precautions devised to retain it near the wound. Circumscribing adhesion cannot be expected; the ligatures of retention will maintain an irritation without affording the security it but seems to promise. The plan of embracing the living omentum in a ligature, for the purpose of a defence against hemorrhage, is crude and monstrous. This ligature of safety must be allowed to remain. While it remains, it must operate as the stricture did, so that you see the matter just comes to this, that one cause of strangulation has been substituted for another. If the living omentum is to be incised, why are we to depart from the best principles of surgical science? It surely would be more in accordance with these to unfold it, and when it is subsequently divided, to apply a slender and separate noose upon each bleeding vessel. Having done this, I feel indisposed to return the omentum into the abdomen, I would leave it in its sac, and I would then of course dress up the whole wound, and manage all local matters as if it was one arising from any other cause.

It can hardly be necessary to remind you at this period of your studies, that union by the first intention cannot take place; the parts suffered before operation to an extent you understand, and you

must see from what you observed in the operation, that they cannot be in a state admitting of non-suppurative adhesion. Matter forms here, and the cure is finally effected by the slow process of granulation and cicatrization.

SYLLABUS

OF A

COURSE OF LECTURES

ON

ANDROLOGY, GYNÆCOLOGY, AND PŒDOLOGY,

OR

On the Reproduction of the Human Species and all organised Beings; Normal and Abnormal Parturition, or Human Obstetricy; and on the Hygiene or Physical Management, and the Medical Treatment of the Diseases of Women and Children; with a new Nomenclature of Obstetric and Infantile Medicine.

By Michael Ryan, M.D., &c. &c.

Andrology; extent and arrangement of the subject.

Moral and physical inquiries; physiology of puberty; age proper for marriage; premature, ill-assorted, and late marriages; their influence on morals and population; physiology and pathology of the genital organs; hygienic and morbid effects of the use and abuse of these organs; their influence on fecundity, health, and longevity; influence of monogomy and polygamy on morals and population; moral and physical disqualifications for reproduction of the species; influence of age, habit, constitution, temperament, season, climate, plenty, famine, public rejoicing, &c.; on fecundity, births, and mortality. These subjects investigated by theologians, legislators, juris-consults, physiologists, and all classes of society.

Inaccuracy of present obstetric terms; their proposed improvement.

Lecturer's arrangement of the subjects considered, in a course of Lectures on Midwifery and Diseases of Women and Children. His introduction of the term obstetrician in place of manmidwife and accoucheur, 1828; its adoption by Dr. Blundell; his introduction of the term obstetricy in place of midwifery in 1830; its adoption by Dr. Blundell and others; its universal adoption. History of the rise and progress of obstetricy from the earliest period to the present time. Arrangement of obstetricy, or ol stetric medicine.

Gynæcotomy; or anatomy peculiar to woman.

a. Osteology of the female pelvis; its bones, articulations, and ligaments; its description, form, admeasurements; its obstetric divisions, diameters, axes, planes, &c. in the normal and abnormal conditions.

b. Description of the fœtal head at the full term of uterine gestation; its dimensions, diameters, axes, planes, adaptation to the maternal pelvis during natural parturition.

Deformities of the pelvis, pelvimeters, &c. Causes of deformities.

c. Dimensions of the infantile shoulders and pelvis, and the adaptation of these parts to the pelvis of the mother during natural parturition by the head, and abdominal extremity of the fœtus, or breech, knees, and feet.

d. Mechanism of natural parturition by the infantile head and abdominal extremity.

Anatomy of the external and internal organs of generation.

External organs of generation.—Mons veneris and labia; cohesion of labia; clitoris and its diseases; meatus urinarius and catheterism; labia minora, or nymphæ, and their diseases; hymen, its diseases, and the popular errors relating to it; carunculæ myrtiformes; perineum anterius and posterius; summary of facts relative to the sexual external organs.

Internal organs of generation.—Uterus, its structure and functions; uterine tubes; ovaries; vagina, or vulvo-uterine canal; its structure and functions.

Gynœcophysilogy; Physiology of Woman.—Physiology of puberty; effects of puberty on the physical, moral, and intellectual states of both sexes; development of genital organs; influence of climate, habitation, &c. on puberty; proper age for marriage.

Division of the subject.—1. Puerile sterility; infancy. 2. Establishment of fecundity; physical and moral changes caused by puberty; impregnation before menstruation. 3. Established fecundity; menstruation, nubility, physiology of menstruation. 4. Cessation of menstruation; senile sterility.

Establishment of menstruation.—Discharge of menses; phyical and chemical qualities of menstrual fluid; duration of evacuation; use of; cessation of menstruation; senile sterility; physical changes in constitution; prevalence of diseases; mortality; changes in genital organs.

Hygiene of woman at the different

periods of life, which influence reproduction; difference of male and female constitution; principal objects of hygiene; influence of atmosphere on woman; errors in dress; bad effects of tight lacing; errors in diet; abuse of tea and coffee; bad effects of scholastic discipline; want of exercise productive of spinal and other deformities; precepts on secretions and excretions; importance of regularity of the bowels; influence of the moral and intellectual conditions on female health. Hygiene of puberty, relative to conception, pregnancy, and parturition; the puerperal state and lactation; popular errors; importance of hygiene to female and infantile health.

GENESEOLOGY; REPRODUCTION; GENERATION.

Universal code of generation of plants and animals.—Reproduction of organized beings, organic and inorganic matter; differences between plants, animals, and minerals; reproduction of plants and animals; different modes of generation, 1. oviparous, 2. viviparous, 3. gemmiparous. Spring the genital season; identity of the sexual organs of plants and animals; analogy between the germination, maturity, and seeds of plants, and impregnation, uterogestation, incubation and parturition of animals; influence of propagation on animals and plants; male animals, except man, scarcely approach their females after impregnation; vigour and physical beauty preferred by female and male animals; ill-assorted and unequal marriages among all classes of society; imperiousness of the sexual function in animals; modified by mind and education in the human species; still the frequent cause of quarrels and dissensions among men; of duels; actions for criminal conversation; divorce; seduction; bastardy; infanticide; and prosecutions of the sexes for homicide.

Effects of vigour and physical power on offspring; sons of great men seldom resemble their fathers; illustrious men the offspring of parents remarkable for physical power; Dr. Gregory on family resemblance; opinions of Eastern nations; heroes engendered by the impulse of love; effect of continence on offspring; degeneracy of the nobility of France, Spain, Portugal, and Italy, and of the Jews in all countries, from intermarriages among themselves; baneful effects of diseases, and especially of ill-cured syphilis on progeny; attractions of animals to reproduction; generation of birds, reptiles, and quadrupeds; numerous illustrations; periods of incubation of birds, and gestation of inferior animals; instinctive care of inferior animals to preserve their young; animals confine their amours to their own species; comparative fecundity of man and inferior animals; generation of insects; pro-creation of bees; reproduction of animals and plants by sections or divisions.

Generation of plants.—Physical differences between plants and animals; sexual organs of plants; amours of plants; reproduction; sexual approach; ejaculation of pollen (seed), impregnation, gestation, parturition; fructification; analysis of the fruit; dissemination of plants; germination.

Generation of animals.—Classification of animals; 1. zoophytes, 2. insects, 3. crustacea, 4. worms, 5. mollusca, 6. fishes, 7. reptiles, 8. mammiferæ.

Generation of zoophytes, insects, crustacea, worms, and mollusca.

Generation of fishes, reptiles, serpents, frogs, salamanders, toads, tortoises, and lizards.

Generation of birds.—Ovology; developement of the fecundated egg, as observed by Harvey; modern ovology.

Generation of mammiferæ.—Of quadrupeds; Harvey's conclusions; fecundation and ovology; Harvey's account of the reproduction of hinds and fallow-deer; their ovology; identity of ovology with that of the gallinaceous egg; changes in the uterus; *Harvey's theory of generation.*

Ovology of mammiferæ.—Of deer, according to Harvey; developement of the embryo seven days after impregnation; fœtal circulation; chorion and amnios; vascular connexion between the fœtus and uterus; embryo in different horns of the womb; its analogy with the human fœtus; embryo nourished by its own vessels; developement of the caruncles of the womb; chorion very slightly adherent to the womb; fluid between the chorion and womb; fluid between the chorion and amnios; analogy with the gallinaceous egg and human ovule; developement of the uterus, fœtal viscera, caruncles, and placenta; ovology in sheep; fluid in the stomach of the fœtus; ovology of viviparous animals.

Polygamous mammiferæ.—Reproduction; longevity of inferior animals; uterogestation of inferior animals; duration of pregnancy; position and number of mammæ; parturition and maternal tenderness of animals.

Causes which influence fecundity.—Abundance and scarcity of aliment; comparative fecundity in maritime, cold, and warm situations; in cold and warm climates; population in affluent and impoverished nations; preponderance of births to deaths in temperate climates; comparative increase of population from the poles to the equator; influence of temperament on generation; influence of the passions and volition; impregnation during sleep; causes of infecundity; a mother of sixty-seven infants.

Influence of the sexes in reproduction.—Comparative number of births in different seasons and months; influence of seasons in different climates, and in determining the sex of offspring; is there a hora genitalis? bad effects of inebriation on offspring; causes which favour fecundity; comparative influence of; influence of climate, season, abundance of aliment, famine, prosperity, misery, and slavery on fecundity and population; influence of seasons on fecundity.

Variety of the reproductive function, according to temperament and habit; influence of temperaments, moral and physical states, continence, literary, scientific, sedentary pursuits, labour, idleness, and luxury on reproduction; influence of moral and physical states on conjugal unions; hygiene relative to reproduction; influence of reproduction on the moral and physical conditions of the offspring; salutary and morbid results of the reproductive function.

Procreation of the sexes at will, and of a vigorous population; supposed illustrations; precepts on the subject; objections to this hypothesis; modern physiological conclusions against it; salutary and marked effects of reproduction; transmission of moral, physical, and intellectual states of parents to offspring conclusions of Mr. George Coombe and Dr. Pritchard; transmission of diseases and malformations; maternal influence on the fœtus in utero; bad effects of early marriages; conclusion on hereditary transmission.

Institution and object of marriage.—Healthful parents beget healthful infants, and diseased or delicate parents engender feeble infants; proper age for marriage in temperate climates; diseases caused by the consummation of marriage; sterility, &c.; hygiene of marriage; proportions of stature of those entering into the matrimonial state; great disproportion to be avoided; dangers by it to the mother and infant during parturition; consummation of marriage cannot be effected in some cases; irritation of the genital organs in infants from intestinal irritation, improper diet, worms, &c.; its aggravation at puberty; excites masturbation, or self-pollution; gross immorality in boys of twelve years of age who kept concubines; juvenile prostitution in London (1836).

Physiology and pathology of the genital organs, as regards fecundity, infecundity, health, longevity, and society, of vast importance; marriage the means of man's happiness and the perpetuation of his race; it exercises the greatest influence on states and families; proper motives for marriage; precepts on the selection of husbands and wives.

Happiness and unhappiness of the marriage state.—Duties and cares of the married life; superiority of marriage over celibacy; violation of the marriage vow; seduction; immorality of modern fashionable life; false and selfish motives influence the majority of the world in contracting marriages; mercenary considerations; decrepitude and mental imbecility preferred to the manly vigour of youth; violation of the most solemn engagements; folly of attaching too much importance to personal charms, or in wedding poverty or deformity; personal appearance and pecuniary circumstances not to be excluded; duties of husbands, wives, and parents, based on virtue and religion, requisites for happy matrimonial unions.

Influence of polygamy and monogamy on morals and population.—Polygamy, or polygyny, sanctioned by ancient legislators, and lately attempted to be revived by the St. Simonians in France, and Owenites in Great Britain; incontrovertible objections to it; neither paternity, family, patrimonial possession, division of landed property, could be established without marriage; all would belong to all; no one would exert himself for his race, and the result would be a state of barbarism, as in savage nations, and all laws of society would be overturned. No man would allow an infant to be affiliated to him, when he had reason to doubt he was the father; a community of women would daily excite quarrels, disputes, legal proceedings, duelling, murder, &c. Necessity of conjugal fidelity; violation of it sanctioned in many countries, common in the British dominions in former times; signs of virginity equivocal; sanguineous effusion not invariable on the first sexual intimacy; incontrovertible arguments in fa-

vour of monogamy; causes of libertinage; virtuous women restrain the most inconstant husbands.

Conjugal and paternal duties and obligations.—Obligation of physically educating, supporting, and providing for children; and of removing all dangerous things from within their reach; parents are bound to supply their offspring with a home, food, raiment, and all necessaries; to procure them literary education, and to permit them to adopt any trade or profession for which they show a preference or inclination; mothers are bound to suckle their infants, unless when labouring under certain diseases, or when in delicate health; maternal, mercenary, and artificial lactation; other cares and duties; corporeal chastisement now universally condemned by physicians, and suavity and moral influence preferred; obligations of parents towards each other equally obligatory on both sexes; conjugal fidelity ought to be inviolable; contrary opinions entertained by Dr. Samuel Johnson and Martin Luther; ordinary causes of infidelity based on error; reason, religion, and public morals opposed to it.

Reproduction of the Human Species.—Preliminary remarks; identity of the sexual organs in structure and functions; ancient and modern theories of generation; the germs, male, and female; fecundation; its site and mechanism; the corpus luteum; artificial fecundation; conception.

Uterogestation; uterine pregnancy. 1. Anatomical changes in the uterus, in size, form, position, direction, thickness, structure; changes in its appendages in the abdomen and viscera. 2. Sympathetic phenomena; rational and sensible, or physical signs; vaginal, anal, and abdominal examination; ballottement and passive movements of the fœtus; active movements of the fœtus: auscultation; bruit de souffle, fœto-cardiac bruit; epoch of pregnancy.

Multiplied, plural, or compound pregnancy; extra-uterine pregnancy; anatomical disposition; ovarian, abdominal or peritoneal, tubal, utero-tubal, and utero-interstitial pregnancy; progress of extra-uterine pregnancy; progress; signs, termination; death of the fœtus; rupture of the cyst; treatment; spontaneous separation of the cyst; gastrotomy; elytrotomy; false, or supposed pregnancy; retension of the menses; diseases of the uterus and its appendages: nervous pregnancy; recapitulation.

Ovology; ovum; its appendages; in simple pregnancy; the *membranes*, caduca, or decidua, chorion, amnios, and fluid of the amnios; *vesicles*, umbilical vesicle, allantois; *navel cord and placenta*, umbilical cord; placenta. Multiplied and extra-uterine pregnancy.

Ovology in simple pregnancy; *ovule* in general; the *Embryo;* spine, head, and organs of sense, mouth, nose, eyes, ears; extremities, coccyx, and genital organs; second embryonary period; dimensions; *Fœtus;* ages and gradual development; altitude and position of the fœtus. Multiplied fœtuses; superfœtation; *physiology of the ovule;* nutrition; by the fluid of the amnios; by the placenta; by the direct circulation of the mother; peculiarities of the fœtal organs and circulation of the blood; respiration; vagitus uterinus, or uterine and vaginal respiration; viability of the fœtus; term of uterine gestation; protracted and precocious births.

Tocology; Parturition; Anormal Parturition.—Abortion; its mechanism, frequency, causes; diseases of the woman, diseases of the ovum, occasional causes, symptoms, prognosis and treatment; moles.

Classification of labours; labours in general; parturition in a state of nature.—Causes, efficient, accessory, and determinant. Stages of labour; 1. dilatation of the orifice of the uterus; rupture of the membranes and escape of the amniotic fluid. 2. Passage of the infant. 3. Expulsion of the placenta. Precursory signs; pain; dilatation of the uterine orifice; discharge of the vaginal mucus ("shews") escape of the amniotic fluid or "waters."

Labours in particular; Eutocia, simple, spontaneous, or natural labour.—*Natural eutocia by the head;* regular presentations of the head. I. Occipito-anterior positions; first variety, left occipito-cotyloid position; second variety, right occipito-cotyloid position; remarks on the first two positions; third variety, occipito-pubic position; remarks on the occipito-anterior positions. II. Occipito-posterior positions; first variety, left fronto-cotyloid position; second variety, right fronto-cotyloid position; remarks on the occipito-posterior transmutations; third variety, fronto-pubic position; general remarks on the positions of the cranium.

Presentation of the face.—First position, right mento-iliac; second position, left mento-iliac; third position, mento-

sacral; fourth position, mento-pubic; general remarks on the presentation of the head.

Non-natural eutocia; presentation of the abdominal, or pelvic extremity of the fœtus.—Presentations of the feet. 1. Position, calcaneo-anterior; first variety, the loins in front, and to the left; second variety, loins in front, and to the right; third variety, loins directly in front. II. Calcaneo-anterior positions; remarks on the positions of the feet; presentations of the knees; presentation of the breech. I. Sacro-anterior positions; first, second, and third position. II. Sacro-posterior position; fourth position.

Duties of the obstetrician in eutocia or spontaneous parturition; diagnosis; pains; state of the uterine neck; false pains; obstetric position; vaginal examination to determine the presentation, whether of the head, face, or pelvis; external examination; prognosis. 1. Cares required during paturition; cares relative to the woman; hygiene, diet, &c.; adjustment of the woman's dress and bed; position of the obstetrician; mode of instituting a vaginal examination; mode of supporting the perineum. II. Cares required by the fœtus in presentations of the head and pelvis.

Cares required in painful and tedious labours; delay of parturition by various causes; irregularity of the pains and uterine contractions; collection or "bag" of waters; false waters; inaction of the uterus; use of secale cornutum, and directions for its preservation, preparation, and administration; compression of the abdomen during parturition by means of a roller or broad bandage; cares required by the new-born infant; ligature of the navel cord, ablution, dress, aliment, &c.

Cares required by the woman after delivery; bandage of the abdomen; garniture of the vulva; application of a warm napkin; arrangement of the bed; hygienic cares; puerperal phenomena; lochia, after pains; secretion of milk; milk fever; hygiene of lactation or suckling; ablactation or weaning as regards the woman.

GYNÆCOPATHOLOGY—DISEASES OF WOMEN. I. PARTHENOSOLOGY, OR DISORDERS OF NUBILITY, OR OF THE FUNCTIONS PECULIAR TO WOMEN.—Disorders which precede menstruation; different irritations which supervene at the approach of puberty; chlorosis; dysmenia; amenia; disorders of menstruation; dysmenorrhœa; amenorrhœa; menostasia; menoxenia; menorrhagia; menopausis, or natural cessation of the menstrual secretion; precursory signs of the critical age; diseases of women at the critical age; means to prepare the economy to undergo the changes and disorders caused by the cessation of the menses.

Diseases of the organs of generation.—Diseases of the *vulva*. 1. Diseases of the *labia externa;* absence of the labia; union or cohesion of the labia; wounds and contusions of the labia, phlegmon, carcinoma, œdema, cysts, fibrous tumours and varices of the labia. 2. Diseases of the labia interna or nymphæ; excessive length, union, laceration, contusion, inflammation, abscess, and fungous tumours.

3. *Diseases of the clitoris;* excessive length, carcinoma, excrescences, &c.

4. *Diseases of the meatus urinarius;* imperforation of the urethra, stricture of the urethra; ulcerations and carcinoma.

5. *Diseases common to all parts of the vulva;* erysipelas, prurigo, chancres, ulcerations, syphilitic excrescences, &c.

Diseases of the internal organs of generation.—1. *Diseases of the vagina;* vices of conformation; absence of the vagina; shortness and contraction; imperforation and obliteration of the vagina; congenital or accidental opening of the vagina into the rectum, and into the bladder; lesions of relation of the vagina; prolapsus of the mucous membrane; invagination of the vagina; vaginal cystocele and enterocele; foreign bodies in the vagina; fistulæ of the vagina; uretro-vesico-vaginal fistula; recto-vaginal fistula; polypous and other tumours in the vagina; contusions, lacerations, wounds, and inflammation of the vagina; acute and chronic elytritis; leucorrhœa, or mucous discharges; muco-purulent, hydatic, and other discharges; spasm of the vagina; expulsion of gas from the vagina.

2. *Diseases of the uterus or womb;* absence and vices of conformation of the womb; contusions and wounds of the womb; metrorrhexia, metrorrhexy, or rupture of the womb; inflammation; acute and chronic metritis; uterine phlebitis; scirrhus and cancer of the womb; lesions of relation of the womb; metroloxia, or obliquity, retroversion, anteversion, renversement (depression or exclusion of the fundus uteri at or through the uterine orifice or vulva), and metroptosis, or descent or prolapsus of the womb; hysterocele, or metrocele; hernia of the womb; metrocampsis, metrocampsy, or inflexion or inclination of the uterus; uterine hæmorrhage, metrorrhagia, and

hysterorrhagia; anormal productions of the womb; calcules, or stones in the substance of the uterus; hydatids; hydrometra; uterine hydropsy, uterine tympanites, metropolypus, polypus, and various other tumours; metro-neurosis, metrodynia, hysteralgia, and irritable uterus; hysteria; metromania, or nymphomania, furor uterinus; false nervous pregnancy, gaso-hysteric pregnancy (from gas in the uterus), inertness or adynamic state of the uterus.

III. *Diseases of the ovaries.*—Ovaritis, scirrhus and cancer, encysted tumours, hernia, rupture, dropsy, engorgement and degenerescences of the ovary.

IV. *Diseases of the uterine or Fallopian tubes.*

V. *Diseases of the mammæ.*—See Diseases relative to Lactation.

Encyonosology—Diseases of Women relative to Generation.—Diseases of pregnancy; accidents of conception; impotence and sterility; depraved conception; extra-uterine conception; abdominal pregnancy; *afœtal, bigeminal; complex,* two fœtuses one within the other; *complicated,* a fœtus with an abdominal production, as fluid, hydatids polypus; *compound,* several fœtuses in the womb at the same time; *false,* from the increase of the size of the uterus or its appendages, not caused by a fœtus in the uterine cavity; *gazo-hysterical,* false pregnancy produced by gas in the cavity of the uterus; *hæmato-hysteric,* from blood in the uterine cavity; *ovarian* pregnancy, in which the fœtus is developed in the substance of the ovary; *sarco-fœtal,* pregnancy of one or more fœtuses complicated with moles; *sarco-hysteric,* pregnancy formed by a mole or false germ; *trigegeminal,* pregnancy in which three fœtuses are developed in the womb, simultaneously; *tubal,* pregnancy in which the fœtus is developed in the uterine tube; *utero-abdominal,* pregnancy formed by two fœtuses, one developed in the womb, and the other in the cavity of the abdomen or peritoneum; *utero-ovarian,* one fœtus in the womb, and another in the ovary; *utero-tubal,* one fœtus in the uterus, and the other in the uterine or Fallopian tube.

Diseases relative to pregnancy.—I. Idiopathic diseases of the womb; abortion, miscarriage, and premature parturition. II. Sympathetic disorders and diseases dependent on the influence of the womb on the different functions of the organism.

1. *Disorders of the digestive organs* during utero-gestation or pregnancy.—Anorexia, or nausea or "morning sickness," depraved appetite; vomiting; epigastric pain, or gastrodynia; pyrosis, or waterbrash; ptyalism, or salivation; odontalgia, or toothache; secretion of gas, or flatulence in the stomach and intestines, causing spasms, acute pains, or colic; constipation, or costiveness; diarrhœa; dysentery; tenesmus; retention, or incontinence of urine; different kinds of hernia; hæmorrhoids, or piles; hæmatemesis, or vomiting of blood; cholera.

2. *Disorders affecting the organs of respiration* during pregnancy.—Dyspnæa, catarrh, spasmodic cough, hemoptysis or spitting of blood, pleuritis, bronchitis, pneumonia, phthisis and other diseases of the lungs.

3. *Disorders of the circulation* during pregnancy.—Palpitations and irregularities of the heart's action; syncope, or fainting; general plethora; hæmorrhages from the nose (epistaxis), rectum (piles), varicose veins in the inferior extremities, labia pudendi, veins of the abdomen; anascara; dropsy of serous membranes, ascites; hydrothorax.

4. *Disorders of the cerebro-spinal apparatus during pregnancy.*—Exhilaration or depression of spirits; insomnia, agrypnia or want of sleep; cephalalgia or headache, or various unnatural sensations in the head; convulsions; ophthalmic, acoustic, olfactive neuroses, ophthalgia, otalgia, &c.; various neuralgiæ or painful sensations along the spine, sides, and different parts of the body.

5. *Disorders and diseases of the genital organs.*—Neuralgic affections; gonorrhœa; syphilis; and all the diseases enumerated under the head of parthenosology.

Tocopathology; Diseases relative to Parturition; Dystocology, Dystocia.—Difficult; preternatural; artificial or mechanical parturition. I. Chirotocia; parturition effected by manual operation. II. Mechanotocia; parturition effected by mechanical means.

1. *Obstacles dependent on the mother.* Dystocia anenergica, partial or inertness of the action of the uterus, delicacy of constitution, passions of the mind; hydramnios, or dropsy of the amnios, of false waters, imperfect discharge of the amniotic fluid, rigidity of the membranes; primiparous labour; advancement of age; premature rupture of the membranes, rigidity or scirrhosity of the uterine orifice, rigidity of the vulva, tumors in the vagina or in the vulva, inversion of the vagina; displacements of the ute-

rus; dystocia ectopia, metrolaxia, obliquity of the uterus; metrocampsy, deviation or inclination of the uterus; metrococes, tumors of the uterus; prolapsus and hernia of the uterus; dystocia from disproportion between the cavity of the pelvis and the infant's head; smallness of the pelvis; dystocia amorphica, obstacles presented by the pelvis; distortion of the pelvis, infantile head unusually large or ossified, or enlarged by disease; presentations of the face; presentation of the head with one or both arms; dystocia from diseases of the genito-urinary organs; suppression of urine, calculus in the bladder, distention of the bladder or rectum, excrescences of the os uteri; vulvo vaginal cohesion or atresy, anomalous affections, enlargement of the ovaries; rupture of the uterus or vagina.

2. *Obstacles dependent on the fœtus.*—Death and mal-presentations; dystocia cranialis (cranial), facialis (facial), frontalis (frontal), occipitalis (occipital), auralis (aural), temporalis (temporal), humeralis (humeral), glutealis (gluteal, breech), and all transverse presentations, or "cross-births" of the infants; diseases of the fœtus; excess of volume, dropsies, different tumors, multiplied fœtuses; twins, isolated and monstrous; presentations of different parts of one or more infants.

1. Chiratocia. 2. Mechanotocia. Tocologic Operations.—Objects—1. to preserve the lives of both mother and infant; 2. to preserve the life of the mother; 3. to preserve the life of the infant. *Instruments* contrived to fulfil the first intention: 1. forceps; 2. vectis or lever; 3. blunt-hook; 4. fillets. *Instruments* contrived to fulfil the second intention: 1. perforator; 2. craniotomy forceps; 3. crotchet; 4. blunt-hook. *Instruments* contrived to fulfil the third intention: 1. scalpel; 2. bistoury; 3. needles and sutures.

Chiratocia.—Parturition effected by the hand; version, turning; mechanism; position of the woman; position of the obstetrician; choice of the hand; podalic or pedal version; cephalic version; introduction of the hand; mutation of the fœtus; extraction of the fœtus; podalic version in positions of the head; left and right occipito-iliac positions; podalic version in presentations of the face, and in mal-positions of the cranium; podalic version of the trunk, shoulder, side, sternum, and back; podalic version in presentations of the pelvis; positions of the feet, knees, and breech; presentations of the arm.

Mechanotocia.—Parturition assisted or effected by instruments; *forceps and lever;* indications; parts of the fœtus on which the forceps is applied; application; application in the occipito-anterior position; in the occipito-iliac; in positions of the pelvis; in twin cases; when the body is expelled and the head retained in the pelvis; application of the *lever;* as a forceps; as a crotchet; fillets; blunt-hook.

Impacted or locked head; contraction of the pelvis; low diet; provoked parturition; induction of abortion and premature parturition; operation; abortives.

Symphyseotomy.—Division of the symphysis pubis.

Abdominal hysterotomy, gastro-hysterotomy, or the Cæsarean operation.—Its history; manual operation, before and after the death of the woman; *elytro-hysterotomy.*

Operations practised on the infant.—*Cephalotomy, embryotomy,* use of perforator, craniotomy forceps, and crotchet. *Cephalotripsy*—head remaining alone in the genital organs; paracentesis cranii in hydrocephalus; paracentesis abdominis in ascites; hydrorachitis; perforation of the chest in transverse presentations and evisceration of thorax and abdomen; decapitation in transverse presentations; excision of the arm in certain cases of brachial presentation; presentations of the trunk; spontaneous version or evolution; cephalic evolution; pelvic evolution.

Accidental dystocia.—Parturition attended with hæmorrhage; convulsions; prolapsus of the umbilical cord; defective length of the cord; natural and accidental shortening; aneurism, asthma, hydrothorax, ascites, ovarian and other tumors, anasarca, spinal deformity; herniæ; syncope, debility, rupture of the uterus or vagina, or labia, and perineum; presentation of the placenta; labour with a plurality of infants; with malformations of the fœtus, or monsters; with hernia of the bladder; with obliquities of the uterus; labours with inflammation and gangrene of the vagina, bladder, rectum, and uterus; labour through rectum and abdomen.

Toconosology — Diseases relative to Parturition. — Phenomena which follow the birth of a fœtus; expulsion of the placenta or after-birth; mechanism; cares required; manual operation; complicated deliverance; inertness of the womb; size of the after-birth and membranes; contraction of the neck of the

uterus on the placenta; hour-glass or irregular contraction of the uterus; retention of the placenta; hæmorrhage; adhesion of the placenta to the uterus; manual operation; absorption of the placenta, followed by uterine phlebitis and typhus; rupture of the navel-cord; convulsions in multiparous and dystocial labours; false and simulated delivery. Results of preternatural parturitions:—displacements of the uterus; elongation and lacerations of the neck; of the vagina; vesico-vaginal perforations; recto-vaginal perforations; rupture or laceration of the perineum; vulvar lacerations; retroversion of the coccyx; œdema of the vulva; usual effects of delivery on the bladder, intestines, and sexual organs; thrombus of the vulva; sloughing of the external and internal genitals.

Lochionosology—Diseases of Puerperal or Childbed Women.—After-pains; lochial discharge; milk fever; peritonitis; metritis, uterine phlebitis or malignant puerperal fever; painful œdema or phlegmasia alba dolens; phlegmonous abscess; mania; convulsions; re-action from excessive loss of blood; entralgia; intestinal irritation; sacral neuritis; abscess of the pelvic joints; the sacro-coccygeal, pubic; sacro-iliac; paralysis of one or both inferior extremities; ephemera, intermittent fever, or weed, miliary fever.

Galactonosology.—Diseases relative to lactation or suckling; agalaxy, want of milk; polygalacty, excessive secretion of milk; retention of milk in the breasts; galactirrhœa, involuntary discharge of milk; depravations and alterations of milk; oligogalia, or defect of milk.

Diseases of the organs of lactation.—Diseases of the nipple; malformations; inflammation, excoriation, ulceration, and venereal chancres of the nipple.

VI. Diseases of the mammæ or breasts; vices of conformation; contusion, inflammation, abscess, scirrhus, cancer, and encysted tumors of the breasts. Mastodynia, mastoneuralgia, or irritable breast.

Hygiene of lactiferous women or wet-nurses. Galactosis, or secretion of milk; galactopoietic remedies; influence of diet and medicine on breast milk.

INFANTILE HYGIENE, OR PHYSICAL EDUCATION OF INFANTS.—INFANTILE MEDICINE.

Physical and moral education of infants from birth until ablactation or weaning, including precepts on maternal lactation or suckling—mercenary lactation—rules for the selection of wet-nurses—artificial lactation or dry-nursing—solid aliments of infants—the proper period for ablactation or weaning—dress—air—exercise—placing the infant on its feet—walking—sleep—repose—cots—cradles—waking—cleanliness—ablution—washing—bathing—moral management—constitution—and regulation of the nursery.

In order to render the subject of hygiene more interesting, I shall adapt it to the following epochs of life. Infancy, which extends to the end of the second year, when the first dentition is in general completed; childhood, which extends from the end of the second to the termination of the seventh or eighth year, the time at which the second dentition is terminated; boyhood or girlhood, which commences at the seventh or eighth year, and continues until puberty, which, in this country, is the fourteenth or fifteenth in the male, and the twelfth or fourteenth in the female. At this age adolescence commences, and maternal influence ceases in a great degree.

I. Ovology—ovophysiology.—The anatomical and physiological states of infants.

II. Ovopathology—embryopathology.—The pathological state of the fœtus.

III. Embryonosology, or description of diseases of the fœtus in utero.

a. Hereditary diseases.
b. Malformations.
c. Congenital diseases.
1. Those caused by parturition.
2. Those caused by malpractice.
3. Those caused by malformation.
4. Medico-legal inductions.
Mortal malformations and diseases.
Non-mortal malformations and diseases.
Those that do not oppose vitality.

IV. Pædonosology—Infantile medicine—Pædonosography—History of diseases in particular.

a. The etiology or causes of infantile diseases.
b. The diagnosis of infantile diseases, deduced from the cerebro-spinal, circulatory, respiratory, digestive, secretory, locomotive, cutaneous, and generative systems.

V. Infantile therapeutics, comprising comments on remedial agents, cathartics, emetics, narcotics, epispastics, counter-irritants, general and local bleedings, &c.—Rules for prescribing.

1. Diseases of the cerebro-spinal system.

2. Diseases of the circulatory and respiratory system.
3. Diseases of the digestive system.
4. Diseases of the lymphatic system.
5. Diseases of the secretory system.
6. Diseases of the muscular system.
7. Diseases of the osseous system.
8. Diseases of the ligamentary system.
9. Diseases of the senses.
10. Diseases of the cutaneous system.
11. Diseases of the genito-urinary system.

VI. Infantile Formulary—or Pharmacopœia.

LETTER ON HOMŒOPATHY.—CASE OF MADAME MALIBRAN.

"Nihil sub sole novum"

[The following communication reached us last week when too late for insertion, and we deem it due to the learned author to make this avowal.—Ed.]

The recent loss sustained by the musical world, gives a momentary celebrity to homœopathy, and it will now only require but little persecution to increase the number of adepts. The present question, What is Homœopathy? remains unanswered by medical practitioners, while the homœopathists boldly proclaim their system a panacea; and in their unbounded and ridiculous pride reject all judgment not emanating from the tribunal they have erected.

In vain does the Academy of Medicine of Paris repel this nebulous and mystic German importation. In vain do physicians, who allow experiments to be made in the hospitals of Paris, London, Vienna, Naples, unanimously declare it impotent, the homœopathists admit of no conviction, acknowledge no superior medical authority, pronounce the Academy of Medicine incompetent, and deem the trials made in the hospitals inconclusive: in short, all the learned men of Europe are looked upon as cyphers, because they condemn their pernicious doctrines.

But homœopathists do not rest here, they assert that medical science from the time of Hippocrates to the present day is but a tissue of deceptions and error; a chaos on which the star of Hahneman can alone shed light. "*On m'accordera que la vraie médicine n'avait point été trouvée avant moi,*" says Hahneman.

When this German discovery was made known, I felt bound to study it, and became familiar with the productions of Hahneman, Bigel, des Guidi, Queyrard, Haas, and *Belluomini*. I had the same anxious desire to treat my patients speedily, which actuates yourself and all honourable medical practitioners, and therefore putting aside all prejudice, I considered the question fairly; yet I was never induced to lay down my lancet and formulary, and remain a passive spectator of the unrelenting progress of an acute disease. In cases of slight indisposition, in which barley-water and patience are alone necessary, the homœopathic system may be safely employed; but when these means do not suffice, recourse must be had to active antiphlogistic, or derivative medication. It never even occurred to me to reject all the authority of antiquity, all contemporary science; or like another Omar destroy every thing not agreeing with homœopathy. I have had no reason to change that eclectism.

Two years since a lady was attacked with lumbago; I prescribed several globules of bryony, nux vomica in infinitesimal doses; they produced no effect, the patient could not sit up, yet I had obtained my millioneth parts of grains from a celebrated Homœopathist. However this may be, I could not remain a listless spectator of my patient's sufferings. I ordered diaphoretics, which soon gave relief, and the next day I had the lumbar region rubbed with *veratrine* ointment, prepared by Mr. Morson, the chemist, and my patient speedily recovered.

Many cases similar to the one here mentioned soon convinced me that homœopathy was nothing more than a lure for patients: harmless, while only employed in slight indispositions, but far otherwise in acute diseases. I supposed that in France, where the *methode expectante* is more in vogue than in England, where it may be relied on with greater impunity, homœopathy would last a little longer? But I gave up a system which might be considered as a species of mystification; and, if taken literally, be productive of the most serious results. Suppose, for instance, we administer the ten millioneth part of a grain of aconite in a case of acute laryngitis: is there a medical man in the world who had ever studied this disease, who could for an instant believe that an inflammation of the mucous membrane, and of the subjacent cellular tissue could be subdued by such treatment?

Is it possible that a patient labouring

under pleuritis, or pneumonia, and great oppression, could be cured by the thousandth part of a drop of tincture of aconite. When the lungs are gorged with blood, when pulmonary vesicles, mechanically obstructed, no longer give free passage to the air; is the patient, I ask, to be saved by the millioneth part of a grain, or by the lancet, leeches, antimony, or blisters? Can any medical man believe that the millioneth part of a grain, or of a drop of tincture of camomile can cure a puerperal fever?

A lady who had been troubled with an herpetic eruption, which had been improperly treated and repelled, consulted a regular physician, who prescribed for her Fowler's solution, which she had already made use of in Paris, by the advice of M. Marjolin, and from which she deprived benefit. This lady became acquainted with a homœopathist; the medicine was discontinued, and I understand she is now afflicted with anasarca of her legs, which homœopathy allowed to be established, and which it cannot cure. But to indulge no longer in a line of reasoning which may seem too particular, let us enquire what is homœopathy?

According to Hahneman, and all his partisans who adopt as their symbol *similia, similibus, curantur,* we maintain that homœopathy is nothing more than a spurious copy of the doctrine of crisis.

Let us hear Hahneman himself:—"The curative action of medicines is founded on their power of producing symptoms similar to those of the disease, but surpassing them in intensity. Hence it follows that disease can only be annihilated and cured, in a sure, radical, rapid, and durable manner, by means of remedies capable of exciting a series of symptoms resembling as nearly as possible those of the disease itself, and endowed at the same time with an energy greater than that of the disease."—(Exposition of the Homœopathic Doctrine, sect. xxii. p. 127.

Then, a remedy which possesses the property of extending "a dynamic affection to a still stronger one, when the new affection without being of the same kind resembles it closely in the manner in which it manifest itself, it is on this principle," says Hahneman, "*that a disagreeable smell is combated by the smell of tobacco; that the noise of the big drum drowns the distant thunder of the cannon which would carry terror to the breast of the soldier.*"—Hahneman, Organon de l'art de Guerir—traduction de Jourdan, page 126.

But Hahneman here departs a little from his principle, and falls entirely into the doctrine of crisis which treated disease—*Juvantibus, et lædentibus.* To avoid inconsistency, according to his system, there should be louder and more powerful cannons brought close under the soldier's ear, in order to deliver him from the terror inspired by those of the enemy. It is perhaps not impossible, that the efficacy of this louder noise may derive some little strength from the calibre of their own guns, as well as the "weight of metal," they are capable of throwing back upon the remote source of their terrors.

But to continue: "However feeble the dose of the remedy may be," say Hahneman, "provided it *aggravates homœopathically* in the slightest degree, the state of the patient, provided it have the power to give rise to symptoms similar to those of the primitive disease, *but a shade stronger*, it affects preferably, nay, almost exclusively, the parts of the organism already attacked, which being highly irritated, and highly predisposed to receive any further irritation, it thus substitutes for the natural disease an artificial one which greatly resembles it, being but in a *slight degree more intense.*"—Organon, s. c. c. 4. xxx. p. 320.

In point of fact, have homœopathists any other object in view than to accelerate the progress of the disease? Do they not aggravate the disease itself? and is aggravation of the primitive disease by an artificial one, any thing more than the old *coction* of the doctrine of the crisis?

Then, let us suppose that homœopathy, by its billioneth and trillioneth portions of grains, can bring the primitive disease to its termination; we will then, for a moment, become true believers in the power of homœopathy, and proceed to show its application.

A woman is attacked with typhus or nervous fever, with prostration of strength, pains in the head, intermittent delirium, nausea, inappetence, vomiting; this typhus or nervous fever had been preceded by bronchitis, which is sometimes the case, how is she to be treated homœopathically? In the ordinary practice of the poor benighted practitioners of civilized Europe, favourable or unfavourable symptoms are usually observed. If the patient be already brought to the verge of the grave by a primitive disease, shall she be hurried into it by bringing on an arti-

ficial one of the same kind? When there is scarcely breath left in the body, and life is nearly extinct, shall we raise a storm to restore it? Yet, the symptoms above stated being given, what remedies will the homœopathists administer? *In a nervous fever produced by cold, and preceded by an inflammation of the chest, with prostration of strength, delirium, lucid intervals, difficulty of swallowing, oppression, convulsive movements, homœopathy administers the billioneth part of a drop of tincture of Belladona!!!* But beware; for if a millioneth part was administered instead of a billioneth, it would produce a terrible artificial malady, that must infallibly kill the patient, even if she were strong enough to recover from the primitive disease!!! If there be a suffocating cough, a billioneth part of a grain of ipecacuanha is indicated; thus, bryony, nux vomica, arsenic, and aconitum, given in infinitismal doses, will combat other symptoms.

Such are the remedies administered by homœopathists in nervous fevers; such their trustworthy substitutes for tonics, antimonials, diaphoretics, cordials, saline chlorurets, Madeira, and Port wines, with which physicians of some celebrity have, in this country, the folly to cure their patients, in spite of Hahneman's grand discovery.

If the progress of science had not rectified the errors of the doctrine of crisis, the simplest reasoning would suffice to prove, that this said *doctrine* of *crisis*, as well as that of curing a dangerous illness by an artificial malady still more dangerous, is never applicable, particularly when the crisis must be fatal. Do we look forward to a crisis in pneumonia, or bronchitis, when we treat our patient by blood-letting? Do we look for a crisis when we employ derivatives? What will be the crisis of a brain fever, the progress of which is hurried forward? What the crisis of a peritonitis which is allowed to run on unchecked? These reflections, so forcible as regards acute diseases, are also applicable to chronic diseases. "*Similia similibus curantur!* exclaim the homœopathists; but, let us ask them, by what *similar* can consumption and cancer be cured? are these diseases rendered active by slight artificial maladies? or do homœopathists aim at curing phthisis by inducing inflammation of the pulmonary parenchyma? But let us not enter here into a critical analysis of the homœopathic treatment of chronic diseases. This will form matter for another letter.

The fault, we might say the crime, against science and humanity, of which the homœopathists are guilty, is proclaiming their system as the *only true system of medication*, their rejecting every thing sanctioned by experience, their witnessing unmoved the agonies of their patients perishing in acute diseases for want of succour, the victims of a paradoxical system. Had they been satisfied with setting up their system on the same line as numerous others already in existence, some allowance might have been made for this foible, provided they were not so obstinate as to apply it in acute diseases, while they have at their disposal other means more powerful, certain, and efficacious. But they are too absolute for a line of conduct so reasonable; while we, reviled physicians, for the sake of our patients and ourselves, borrow and appropriate from every source, the homœopathist recognizes no authority, no facts, no experience, beyond the doctrine of their oracle; in short, Hahneman is their Hippocrates and entire encyclopædia, dispensing with all reasoning and observation on the part of his disciples. But where are the names of the celebrated men who have adopted this sytem? Can it be said that those who forced vaccination upon unwilling millions for their benefit, would not be equally disinterested with respect to homœopathy, had its adoption offered even a chance of being attended with advantage? Unable to cope with the common sense of the public, homœopathists unblushingly assert that reason, observation, experience, and all the sources of truth and knowledge, are false, and that they alone are *right*. In France, they lately rejected the judgment of the learned societies; and in this country, but a few days since, a homœopathist declined the co-operation of the most eminent medical men of a town containing 300,000 inhabitants; yet these services were generously proffered to save an invaluable life.

I again repeat, homœopathy is nothing more than a spurious copy of the doctrine of *crisis*; in acute diseases, if it kills not, it allows the victim to perish. When active, if it perturbs not the progress of the disease, it hurries it on, aggravates it, and precipitates its fatal termination, so that the motto may be amplified with great truth; and beside the *similia similibus curantur*, may be written *similia similibus occiduntur*.

To ensure the action of a homœopathic pill, the patient must not take any thing

that may interfere with its operation; wine, spirits, beer, coffee, tea, tobacco, snuff, are forbidden. The food must be free from salt, vinegar, pepper; and, indeed, we are somewhat surprised that bread is allowed the patient, or water, which may contain a multitude of noxious principles.

If we could be otherwise than serious upon a subject of such extreme importance, and so pregnant with mischievous results, we should denounce homœopathy to the Temperance Society! for, as the homœopathic pills are prepared with alcohol, there would be some risk, should this system prevail of giving encouragement to drunkenness, which this useful society is so anxious to repress.

I remain, Sir,
Very faithfully your's,
BUREAUD RIOFREY, M. D.

22, *Newman Street, Oxford Street,*
5th October, 1836.

A SUCCINCT ACCOUNT OF THE LIFE OF THE ILLUSTRIOUS JOHN HUNTER;

Collected and arranged from the facts mentioned by his Biographers and other sources,

By MICHAEL RYAN, M.D., M.R.C.S., L. & E.

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More than forty years have elapsed since Sir Everard Home published a short and imperfect account of the life of John Hunter. This is inaccessible to the rising members of the profession, and is but little known even to senior practitioners. It is therefore presumed, that a biographical sketch of the greatest anatomist that ever lived, and consequently the greatest benefactor to the human species, may be attempted with the hope, of inspiring many to imitate his example. All the facts relating to this truly great physiologist are now collected and placed before the reader. Well may every British subject be proud of him, and well may every cultivator of medical science and practice, attempt to imitate his brilliant example.

The celebrated John Hunter, one of the greatest anatomists that ever lived, was the son of John and Agnes Hunter, of Kilbride, in Lanarkshire, and was born on the 13th February, 1728, at Long Calderwood, a small estate belonging to the family.* He was the youngest of ten children, and was born when his father had nearly arrived at his 70th year.

His father was descended from the Hunters of Hunterstown, an ancient family in Ayrshire; and his mother was the daughter of Mr. Paul, a very respectable man, and treasurer of Glasgow.

He had four brothers, John, Andrew, James, and William; and five sisters, Elizabeth, Janet, Agnes, Dorothea, and Isabella; of these, John, Andrew, Elizabeth, Agnes, and Isabella, died during infancy. James was born in 1715, was a writer of the *Signet* in Edinburgh, but in the year 1742 arrived in London on a visit to his brother, Dr. William, who was at that time a teacher of anatomy, and so much was he captivated with the pursuits in which he found his brother engaged, that he proposed to follow them and become a physician. His health, however, became so much impaired by his application to anatomy, that he was obliged to return to Long Calderwood, where he died of spitting of blood in the 28th year of his age. Dr. Hunter remarked, that had his brother James lived to practice as physician in London, nothing could have prevented him from rising to the top of his profession. It would have been a remarkable circumstance, that three brothers should have acquired the first reputation in three different branches of the profession.

William was born on the 23rd of May, 1718, and became unrivalled as a teacher

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* In the Life, by Sir Everard Home, the date of Mr. Hunter's birth is July 14; but Dr. Adams, a subsequent biographer, received a copy of the baptismal register from the Rev. James French, minister of the parish, which fixes the date February 14, which is annually celebrated as the birth day of the illustrious Hunter, by the Royal College of Surgeons in London.

of anatomy. It was under his fostering care that his younger brother John was initiated in this pursuit, in which he afterwards became so distinguished.

He founded the far-famed Anatomical School in Great Windmill-street, Haymarket, now the Hunterian School of Medicine, the theatre where he and his brother John made many of their imperishable discoveries. His biography is already in the possession of the public.* It may be remarked, that many other eminent anatomists laid the basis of their fame in the Hunterian school. Among these were Hewson, Cruickshanks, Baillie, Everard Home, Charles Bell, Wilson, Pearson, Thomas, B. Brodie, Shaw, Mayo, &c., &c., whose example it is to be hoped, will stimulate all their successors in the theatre of the illustrious Hunters.

John Hunter was ten years of age at his father's death, and was left under his mother's care, who was particularly indulgent to him as her youngest son—he was now "the only son at home."

He was sent to a grammar school, but soon evinced "no great love for learning or the learned;" he had no turn for languages, and not being sufficiently under control, he neglected his studies, and spent the greatest part of his time in rustic amusements.

"Such was his aversion at this time to anything like regular application, that it was with no small difficulty he had been been taught even the elements of reading and writing, while an attempt that was made to give him some knowledge of Latin (according to the plan of education then almost universally followed in regard to the sons of even the smallest landed proprietors in Scotland) was, after a short space, abandoned altogether. Thus he grew up, spending his time merely in country amusements, and for many years without thinking, as it would appear, of any profession by which he might earn a livelihood. It was, however, found necessary at last that something should be determined upon in regard to this point, for the family estate, such as it was, had gone to the eldest brother, and the father had made no provision for maintaining John any longer in idleness. So destitute was he of all literary acquirements, there was no other recourse for him, except some business that would give employment to his hands rather than to his head, and one of his sisters having married a cabinet-maker or carpenter in Glasgow, it was resolved that he should be bound apprentice to his brother-in-law†. With this person, accordingly, he continued for some time, learning to make chairs and tables; and this probably might have been, for life, the employment of the genius that afterwards distinguished itself so greatly in one of the most important walks of philosophic discovery, but for circumstances which, at the time when they occurred, were doubtless deemed unfortunate‡."

According to Sir Everard Home, his brother-in-law, and apprentice for six years—his first and best biographer§, and to Dr. Adams ||, it is not stated that Mr. Hunter was apprenticed to his brother-in-law, at Glasgow, but went to assist him in his trade, to comfort his sister, and extricate her husband from his difficulties, in which intention his efforts proved ineffectual. "In short," says Dr. Adams, "there is no doubt, as far as probability and local tradition may be admitted, that John worked at his brother-in-law's trade."

Sir Everard Home is not so explicit. He observes: "Mr. John Hunter, who was now seventeen, went to Glasgow on a visit to his sister, for whom he had the greatest affection, to comfort her in her distress, and endeavour to assist her husband in extricating himself from his difficulties; but finding after some time all his efforts ineffectual, he returned to Long Calderwood."

He was now in his twentieth year, and became tired of living an idle and unprofitable life in the country. Moreover, he was constantly hearing of the success and reputation which his elder brother, William, afterwards the celebrated Dr. Hunter, had acquired as a teacher of anatomy in London: "he wrote to request that he

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* Life by Dr. S. Foart Symonds, 1783—Lives of Eminent British Physicians, Murray, 1833.

† This statement is not corroborated by Sir Everard Home or Dr. Adams, both of whom were well acquainted with the private history of John Hunter.

‡ Life of John Hunter, Library of Entertaining Knowledge, Vol. III. Part 1., August, 1829.

§ Life, prefixed to a Treatise on the Blood, Inflammation, and Gunshot Wounds, 1794.

|| Life, 1817.

would allow him to come to London upon a visit, making, at the same time, an offer to be his assistant in his anotomical researches; or, if that proposal could not be accepted, expressing a wish to go into the army. In answer to this letter, he received a very kind invitation from his brother, and immediately set off for London, accompanied by Mr. Hamilton, a friend of the family, who was going upon business: they rode up together on horseback*."

Fortunately for science, he received a satisfactory answer to his letter, and on his brother's invitation he set out for the metropolis. His arrival and reception in London are thus described by Sir Everard Home:—

"Mr. Hunter arrived in London in September, 1748, about a fortnight before the commencement of the winter course of lectures; and Dr. Hunter, who was very anxious to form some opinion of his talents for anatomy, gave him an arm to dissect for the muscles, with the necessary instructions how it was to be done; and he found the performance such as greatly exceeded his expectations.

"His first essay in anatomy having thus gained him some credit, Mr. Hunter was now employed in a dissection of a more difficult nature: this was an arm in which all the arteries were injected; and these, as well as the muscles, were to be exposed and preserved. The manner in which this was performed, gave Dr. Hunter so much satisfaction, that he did not scruple to say, that his brother would become an anatomist, and that he should not want for employment.

"From this period, we may consider Mr. Hunter as having seriously engaged in anatomy. Under the instructions of Dr. Hunter and his assistant, Mr. Symonds, he had every opportunity of improvement, as all the dissections, at this time, carried on in London, were confined to that school."

In the summer of 1749, Dr. Hunter requested the celebrated Cheselden to permit his brother John to attend the Chelsea Hospital, to which he was surgeon, and there the illustrious author of scientific surgery learned the rudiments of chirurgical pathology. At the commencement of the winter of 1749, or the medical session, Mr. Hunter was so far advanced in the knowledge of scientific and practical anatomy, as to instruct pupils in the dissecting room, to whom his brother had little time to pay attention, he having confined himself to the lectures in the theatre. Thus it appears that after one winter and one summer session, in all twelve months, Mr. Hunter was a competent teacher of anatomy. His great talents, and the extensive patronage of his brother, brought him now every day more and more into notice. In the summer of 1750, he resumed his attendance of the Chelsea Hospital, and 1751 he became a pupil at St. Bartholomew's Hospital, and during the winter was occasionally present at all interesting and extraordinary operations. Mr. Pott was then surgeon of the hospital, and though one of the most eminent surgeons of his day, and one of the most eloquent and impressive lecturers, Mr. Hunter must have observed the unstable foundations of many of his pathological opinions.

In 1753 Mr. Hunter entered as a gentleman commoner at St. Mary's Hall, Oxford. His intentions at this period are not alluded to by any of his biographers. It has been surmised that he had some idea of becoming a Fellow of the Royal College of Physicians in London. Dr. Adams offers a conjectural explanation.—

"May we be allowed to conjecture what might have been the consequence; could John, after five years' close application to the structure of parts in the dead, and the operations of nature in the living body, patiently have engaged in classic lore, rhetoric, geometry, and the higher branches of philosophy. Without these, he would have been little noticed at that learned establishment; and in the acquisition of them, at that advanced age, his zeal in his former pursuits must have languished. It is not likely he should ever have become eloquent; and tardy as his early emoluments were, even in surgery, his pecuniary embarrassments, as a physician, might have been still greater. We may, therefore, consider it fortunate for himself and mankind, that in the following year the design was given up, and he was entered as surgeon's pupil at St. George's. This step may appear superfluous for one, who, by the range of Chelsea and St. Bartholomew's Hospitals, had intercourse with Cheseldon and Pott, the most distinguished men of their age. But, according to the regulations of those two establishments, the chance of his becoming surgeon to Chelsea was very remote, and nothing but an apprenticeship to

* Life by Sir Everard Home, p. 15.

a surgeon of St. Bartholomew's could be admitted as a qualification to become a successor. At St. George's the difficulties might be fewer, and the growing interest of his brother among the great might facilitate his admission.

"Two years after his entrance as a pupil, Mr. Hunter was appointed House Surgeon to St. George's Hospital. This office, it should be observed, is temporary, and may, with much propriety, be called that of resident pupil. The person who holds it has apartments in the house, and is expected to be constantly at hand for all accidents which may be brought to the house, or which may occur in the vicinity."

In the year 1755 Dr. Hunter admitted his brother into a partnership in his lectures, a certain part of the course was allotted to him, and he was expected to supply his brother's place whenever his numerous professional engagements prevented his personal attendance. This must, for the reasons already stated, have been a most unpleasant task for the subject of this biographical sketch. Anatomical, like all other medical lectures, to be rendered interesting, must be delivered extemporary, a talent in which Dr. Hunter can never be excelled, any more than in a perspicuous mode of demonstration. Few lecturers of his day were less suited than his brother to be placed in competition with him.

The qualifications of a medical lecturer are numerous. He must possess a good classical knowledge, correct elocution, as well as a perfect knowledge of his subject. Mr. Hunter was not only master of the anatomy of his time, but enriched it by his numerous discoveries; but he wanted the other requisites for a public speaker, and of an elegant and eloquent lecturer. As a practical anatomist, and as a conservator of anatomical specimens, he had no equal. In his day, preparing and preserving pieces of normal or abnormal anatomy was almost unknown; every preparation, therefore, that was accurately made, became an object of admiration; many were wanting for the use of the anatomical, physiological, and pathological lectures, and Dr. Hunter, being an enthusiast in the art, left no means untried to infuse into his brother a love for his favourite pursuit. How well he succeeded, the incomparable collection of his brother, now in the possession of the Royal College of Surgeons in London, amply attests. It will appear hereafter, that the ardour and perseverance with which he cultivated anatomy have never been equalled.

Mr. Hunter had now worked on human anatomy for ten years, during which he not only became intimately acquainted with what was known, but made some addition to that science. "He traced the ramifications of the olfactory nerves upon the membrane of the nose, and discovered the course of some of the branches of the fifth pair of nerves. In the gravid uterus he traced the arteries to their termination in the placenta. He was also the first who discovered lymphatic vessels in birds. To this catalogue of Mr. Hunter's discoveries, Sir Everard Home adds, in a note, "an account of his injecting the testis, his description of the descent of that body, with observations on hernia congenita, and his experiments in proof of the veins not being absorbents, are published in Doctor Hunter's Medical Commentaries."

But on this passage it is right to remark, that Mr. Hunter, in his work on the "Animal Œconomy," never published a paper under any one of these titles.

He had no claim to the injection of the testis; the discovery of congenital hernia was Baron Haller's; and though the experiments on absorption were conducted in a manner which completely showed Mr. Hunter's sagacity and accuracy, yet the result was not entirely new, and the experiments themselves were suggested by his brother. On the subject of the preceding papers there is a full explanation in Dr. F. Symond's Life of Dr. Hunter, where the share in which Mr. Henry Watson had in the first, Baron Haller's claim to the discovery mentioned in the second, and Nougez's to the third, are candidly admitted.

But the description of the situation of the testis in the fœtus, with its descent into the scrotum, was exclusively Mr. Hunter's; and of all his labours none ever procured him a fame so justly earned, or so universally admitted by those who were most competent to appreciate its merit. Nevertheless, his discovery was claimed by others, and those were Dr. Hunter, Baron Haller, and Mr. Pott. It is very remarkable that Dr. Hunter and Mr. Pott, the only individuals engaged in the controversy, had no share in any part of the discovery. Mr. Pott never understood the subject, and blundered egregiously in the very terms he used*. He very prudently made an early retreat; and the latter edition of his works omitted all that he had written on

* Mr. Lawrence employs a more severe term in his Treatise on Hernia.

the subject. It is also a fact, that Dr. Hunter never appears without quoting his brother's notes.

In the meantime, Baron Haller and Mr. Hunter gave each other an undisputed title to his respective claims. The subject led Mr. Hunter into inquiries concerning the structure of other animals, or, as it is now more elegantly termed, Comparative Anatomy. The structure of certain quadrupeds, and particularly the hedge-hog, had led the illustrious Haller to the correct conclusion as to the exact situation of the testes in the fœtus. Mr. Hunter did not fail on this, as on all other occasions, to consult the book of nature, instead of trusting to human records. This, and other similar investigations, as Sir Everard Home observes, led him into a wide field of research. Many parts of human anatomy being so complex that their structure could not be understood, nor their functions ascertained, induced Mr. Hunter to examine similar parts in inferior animals, in which the structure was more simple, and more within the reach of investigation, and laid the foundation of his splendid collection of comparative anatomy.

In this new line of pursuit this active inquirer began with the more common animals, and preserved such parts as appeared by their analogy, or in some other way to elucidate the human economy. It was not his intention to make dissections of particular animals, but to institute an inquiry into the various organizations by which the functions of life are performed, that he might thereby acquire some knowledge of general principles. "This I believe," says Sir E. Home, "had never been before attempted, or, certainly, had never been carried far into execution." Such, indeed, are the charms of all natural knowledge, that no successful inquirer can set limits to his curiosity.

So eagerly did Mr. Hunter attach himself to the study of comparative anatomy, that he sought, by every means in his power, the opportunities of prosecuting it with advantage. He applied to the keeper of the royal menagerie at the Tower, for the bodies of the animals which died there; and he made similar applications to the men who exhibited wild beasts. He also purchased all rare animals which he could procure; and these, with such others as were presented to him by his friends, he entrusted to the showmen to keep until they died, the better to assist him in his favourite pursuits.

The indefatigable attention he paid to human and comparative anatomy, seriously affected his health in 1760, after he had completed his thirty-second year, and his symptoms indicated the developement of pulmonary consumption. Such was probably the exciting cause of his delicate health; but to it may be added the anxiety which usually attends that age in men, who have only their own diligence and exertions to depend on, and who now begin to fancy themselves losing time, unless they obtain a progressive improving remuneration for their labours. These and other reasons which will be noticed hereafter, might probably have reconciled Mr. Hunter to relinquish his brother's school. It is also probable that the premature death of Mr. James Hunter, caused by phthisis, must have also excited apprehensions of danger in the mind of his brother.

It is certain, however, that a residence in a milder climate was considered extremely advisable. We find, accordingly, that in October, 1760, Mr. Adair, inspector-general of hospitals, appointed Mr. Hunter a surgeon on the staff; and in the following spring he accompanied the army to Bellisle, leaving Mr. Hewson to assist his brother in his absence.

Mr. Hunter served, while the war continued, as senior surgeon on the staff, both in Bellisle and Portugal, until the year 1763, and during that period acquired his knowledge of gun-shot wounds; and, to use his own words in his dedication of his great work on "the Blood, Inflammation, and Gun-shot Wounds," to the King, "of seeing the errors and defects in that branch of military ssurgery, and of studying to remove them. It drew my attention to inflammation in general, and enabled me to make observations, which have formed the basis of the present treatise." To this fortunate event the world is indebted for numerous improvements in civil as well as in military surgery. It is true, that most surgeons of those days were beginning to be dissatisfied with the cruel practice then in vogue; but no one had entered so far into the pathology of surgery, as to reduce it to a science by any rational system or well established rules. The great aim of Mr. Hunter was first to teach the true pathology of surgery, and afterwards to point out the peculiarities in which this branch differed from others. According to Dr. Adams, military surgery occupied but a small space in his course of lectures.

But while he fulfilled his important public duty, and added to the practical and scientific knowledge of his profession, he found time to settle and resolve many physiological doubts. The number of subjects recently killed, and in previous high health, enabled him to trace the healthy structure of every part, and the secretions of some with peculiar accuracy. Of these experiments, Dr. Adams gives the following account:—

"Many of these experiments are published: but I cannot help relating one set. They were the first I heard from him, when my friend and fellow student, Dr. Stokes, introduced me to a lecture in the middle of his course of the year 1782. Observing that lizards and other cold-blooded animals, as they are usually called, passed their winter in a torpid state, without feeling any necessity for food, he was anxious to know what actions were continued at that time. With this view he forced worms and other substances into the stomachs of those reptiles immediately before they retreated into their winter quarters. In the spring, he found the substances remained indigested, and that they passed in that state through the alimentary canal. By this, he proved, that all digestion ceased during the time of hibernation. This precisely accorded with his just conception of the subject, namely, that so little action was kept up during that period as to require no fresh materials for support; and, consequently, that no provision is made by digestion. In order the better to ascertain this point, he wished to see whether the exciting of greater action at such a season would not prove fatal for want of the necessary supply which the waste occasioned by such action would induce. With this view, he brought into the open air, lizards that had been confined in cellars in a torpid state. Being placed in the sunshine, they soon began to bask and move about with great agility; but these exertions were short, and life ceased with them. In the mean while, other reptiles, which remained in the cellars, continued in a torpid state till spring; when they moved spontaneously into the open air, sought their food, and preserved their lives. The important inference he draws from these facts, in illustration of the doctrine of inflammation and mortification, are well known to those who heard his lectures, and, at this time, to most medical readers."

These experiments led him to the investigation of the physiology of digestion, and his researches extended to a vast number of inferior animals, as well as the human species: these will be noticed in a future page.

Mr. Hunter returned to England after the peace of 1763, and alluding to his absence, was wont to say, "I had left long enough to be satisfied how preferable it is to all other countries." He now discovered that he had lost by his absence the few professional connexions he had formed at that early age, and that the tie between his brother and himself was not likely to be renewed. Mr. Hewson now supplied his place in the dissecting-room and in the theatre; he was chosen on account of his industry, and was an able man, eloquent, diligent, and agreeable in his address.

Mr. Hunter had now nothing to depend on but his half-pay. He could indeed say with Simonides, *mea mecum porto*. But a good poet can instantly bring his wares to a good market: a physiologist, on the contrary, must be a long time in preparing them, and when ready, they are only marketable with those who require something more than a temporary festival.

We now view Mr. Hunter at a most important period, in his thirty-sixth year, arriving almost a stranger in the metropolis, his former connexion in a great measure broken, and under the necessity of commencing the world anew. It is very interesting to observe the manner in which two different biographers describe his condition:—

"On his return to England," says Sir Everard Home, "he settled in London, where not finding the emoluments from his half-pay and private practice sufficient to support him, he taught practical anatomy and operative surgery for several winters. He returned also with unabated ardour to comparative anatomy; and as his experiments could not be carried on in a large town, he purchased for that purpose, about two miles from London, a piece of ground near Brompton, at a place called Earl's Court, on which he built a house.

"In the course of his inquiries, this excellent anatomist ascertained the changes which animal and vegetable substances undergo in the stomach, when acted on by the gastric juice; he discovered, by means of feeding young animals with madder, (which tinges growing bones red,) the mode in which a bone retains its shape during

its growth; and explained the process of exfoliation, by which a dead piece of bone is separated from the living.

"His fondness for animals made him keep several of different kinds in his house; which, by attention, he rendered familiar with him, and amused himself by observing their peculiar habits and instincts; but this familiarity was attended with considerable risk, and sometimes led him into situations of danger, of which the following is a remarkable instance:—

"Two leopards, which were kept chained in an out-house, had broken from their confinement, and got into the yard among some dogs, which they immediately attacked; the howling this produced, alarmed the whole neighbourhood. Mr. Hunter ran into the yard to see what was the matter, and found one of them getting up the wall to make his escape, the other surrounded by the dogs; he immediately laid hold of them both, and carried them back to their den. But, as soon as they were secured, and he had time to reflect upon the risk of his own situation, he was so much agitated that he was in danger of fainting."

The following is the account given by another biographer, of Mr. Hunter's situation on his return to England:—

"On his return to England, and at the close of the war, he took a house in Golden-square, and found himself, in point of fortune, better than nothing by his half-pay; that enabled him to pay his house rent, and some other necessaries, requisite ever for those who sit down in practice waiting for patients;—and here commences his first career of a London surgeon.

"What happened to John Hunter, happens to every surgeon in the beginning; there was not employment enough furnished by the practical art, to fill up the active hours of the day. But his resources were in an extraordinary degree advantageous over most young surgeons under the same predicament for want of patients; he experienced no lassitude; he had furnished his mind with the means of employment; and, to say the truth, he was of an uncommon turn to industry."

According to both these accounts, it is manifest that the condition of Mr. Hunter on his return to London was unenviable and most depressing, but we shall find that he overcame all his difficulties. *(To be continued.)*

TO THE EDITOR OF THE LONDON MEDICAL AND SURGICAL JOURNAL.

SIR,

I have much pleasure in sending the names of the gentlemen who attended the Meeting at the Poor-house, Camberwell, on the 13th inst., and I trust that their example will be followed by the members of our profession throughout England.

Yours respectfully,

Walworth, Sept. 20, 1836. E. CRISP.

Beane, Joseph, Peckham
Bisset, Charles E. ditto
Body, W. B. Walworth
Bristowe, J. S. Camberwell
Browne, W. Peckham
Bowen, Charles, Camberwell
Carrol, J. Walworth
Cattermole, James, Camberwell
Crisp, E. Walworth
Delph, J. Newington
Doubleday, E. Blackfriars Road
Eales, W. Union Street
Evans, B. Trinity Street
Evans, E. Blackman Street
Fidler, H. Peckham
Gill, W. S. ditto
S. Hall, M.D. Dulwich
Hooper, R. S. London Road
G. Hull, M.D. Peckham
Leadham, J. W. Kent Road
Lowne, G. G. Walworth
Massy, J. Camberwell
Robinson, R. B. Peckham
Scrimshire, G. Camberwell
Smales, R. Walworth
Stevens, R. Newington
Stokoe, R. Peckham
Todd, G. M. Kent Road
Watson, J. Dulwich
G. Webster, M.D. ditto

I am unable to procure the names of some others who attended, and who voted with the above.

DISSENTIENTS.

Young, R. Camberwell
Hughes, T. ditto
Cory, E. Dulwich
Manico, P. Peckham
Hulbert, J. F. Trinity Square.

The three former gentlemen agreed not to oppose the majority; Mr. Manico,* however, was determined to support the Club.

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* Surgeon to Mr. Mott's Asylum, Peckham.

THEORY OF VISION.

(Academie des Sciences, 1384, du 8 Aout.)

M. CAPITAINE read a paper on this subject at the sitting of the 8th of August. The author's principal object is to prove that the eye is not passive in vision: he founds his opinion chiefly on experiments with which every one is acquainted, but in which he remarks differences not hitherto noticed, and which it would be well to repeat. When a person looks stedfastly on a white surface illumined by the direct light of the sun, and then, after some time, directs his eye to a white object, but one not illumined, the contour of the former surface is for a moment seen on the latter surface in shade, or, as was said, on a black spot. M. Capitaine maintains that it is not as a black spot that the image presents itself in the first instance, but that it becomes green, then red, then indigo; after which it disappears. The author adduces several experiments, which in general present results differing a little from those already known, and from which he draws conclusions not at all similar to those deduced by physiologists.

The Report of a Committee appointed by the Provincial Medical and Surgical Association, at its Anniversary Meeting, held at Oxford, July 23rd, 1836, "To consider the best means of affording Medical Relief to the Sick Poor, and more especially with reference to the Operation of the New Poor Law Act; and to report upon the same to the next Anniversary Meeting at Manchester, in the year 1836."

WE have much pleasure in placing the following Report before our readers, as it is drawn up by several extensive provincial practitioners, who are well acquainted with the working of the New Poor Law Act. It does not admit of analyis.

"The terms of the appointment of your Committee, and the recommendations contained in the report of the Council last year, appeared to suggest a wide field for their labours; embracing a review of the many Public Medical Charities which are to be found in the principal cities and towns of this country, as well as an inquiry into the more extensive, and not less useful, exertions, which have for so long a period occupied medical men in the rural districts.

"But the magnitude of such an investigation, and the pressing nature of certain evils connected with one branch of the subject, determined your Committee, on maturer consideration, to direct their attention chiefly to the present modes of affording medical attendance to paupers, and to the provisions adopted for this purpose by the Poor Law Commissioners; alluding to other points only as they related to the operation of these measures.

"Finding it necessary to obtain some specific information of the steps taken in this matter by the various local Boards of Guardians, your Committee authorized their Secretary to insert, in the principal weekly medical periodicals, a series of questions addressed to country practitioners; it being expected that a sufficient number of answers would be elicited to enable them satisfactorily to draw some general deductions as to the working of the present system, and its advantages or disadvantages as compared with the previous one. In this expectation, however, they were somewhat disappointed. The amount of information received, in answer to the published queries, was but small, though the nature of it was most important. Desirous, however, of corroborating the evidence thus obtained, some members of your Committee, who resided in districts already under the operation of the Poor Law Amendment Act, collected, by personal application, a considerable number of valuable and well-authenticated facts, especially in Berkshire, Oxfordshire, and Buckinghamshire.

"It is, nevertheless, to be observed, that by far the greater number of these applications were not responded to by the parties addressed.

"Much important information has been obtained from statements published in various periodical publications, and your Committee have thought it right to make use of the facts thus communicated, so far as they remain uncontroverted, or have been proved, on investigation, to be correct. The authors of some of these published communications, as well as of others made to your Committee, have requested that their names may not transpire; your Committee, therefore, feel compelled to state, that there exists in the profession much backwardness to give evidence on this subject. Although, for the ends of truth and justice, this disposition is to be lamented, it is neither unaccountable nor, on the whole, inexcusable. A medical practitioner who would relate, without reserve, abuses perpetrated by, or with the sanction of, the influential inhabitants of his neighbourhood, and resulting from

a system upheld and approved by the great majority of the community, should possess a singular combination of prudence, courage, and independent feeling. He would also find it a delicate, if not an invidious task, to report cases of neglect or mismanagement, involving, perhaps, the reputation of another medical practitioner.

"Your Committee were therefore not surprised at the small proportion which the body of evidence collected bears to the number of facts which have occurred under the existing arrangements.

"Another disadvantage which your Committee laboured under, in the prosecution of this enquiry, was the indifference created in the minds of some medical men, by the comparatively favourable terms which, in a very few districts, they had succeeded in making with the new authorities: thus obscuring their perception of the tendency of the general regulations, and checking, to a certain extent, that sympathy with their brethren elsewhere, which, considering the peculiar circumstances of the medical body, is absolutely essential to a preservation of its interests and privileges.

"In other cases, where information was readily supplied, it was a task of some difficulty to separate the bare facts of the case, from the expressions of indignation which a keen sense of oppression and injury had wrung from the correspondents.

"Your Committee, however, did not depend wholly on the materials provided by medical practitioners. The newspapers have teemed with advertisements for medical officers of parochial unions, containing particulars with regard to their appointment, the nature and amount of their duties, and the mode of their remuneration; and the Poor Law Commissioners, in their first annual report, and in other documents, have clearly manifested the intentions of their regulations respecting medical relief, as well as the manner in which they desire these intentions to be carried out. Your Committee have also examined the replies made to the various remonstrances which have been addressed to the Commissioners, whether by way of individual appeal or public protest.

"Your Committee, therefore, trust, that in the conclusions they have formed, they cannot be accused of having taken a partial or imperfect view of the subject.

"Before proceeding with the immediate object of this report, your Committee beg to submit a few observations on the principles which, they think, should guide all who are concerned in providing medical relief for paupers. They may, indeed, appear to insist unnecessarily on some self-evident truths, but experience has shown how strangely these may be forgotten or misapplied.

"The first question that arises is—who are the parties that are bound to provide medical relief for paupers? The legislature has wisely and humanely determined that no person shall perish for want of the necessaries of life; among these necessaries, it has invariably reckoned medical and surgical relief; and it has created, by means of the poor rates, a fund, for this among other purposes.

"The question is, therefore, already decided—that one portion of the community must provide another portion, when sick, with medical attendance. No one has a right to say that the duty of providing for these exigencies shall fall exclusively, or in undue proportion, on the medical profession. Medical men, as private individuals, contribute their quota of the public burdens; they cannot, therefore, be required to bear, *in addition to their own*, that share of these burdens which belongs equally to the rest of the community.

"Your Committee are aware that the vast amount of gratuitous medical assistance that has been at all times afforded to the needy, by all grades of the profession, throughout the country (an amount that could not be conceived by those who were not informed on the subject), has been productive, at least, of one very injurious effect; it has induced the unthinking portion of the public to conclude, that there was some sort of conventional, if not legal, obligation on the medical profession, to attend, without reward, to the ailments of the poor. This kind of misapprehension, or ignorance, of the real state of the case, has, doubtless, been the source of many recent grievances.

"It is, therefore, worthy of consideration, whether it does not become the duty of the profession to prove the fallacy of this popular notion, by some limitation, and greater discrimination, in the supply of their gratuitous advice: by resisting all attempts to convert their spontaneous benevolence into a forced enaction; and by demanding a proper remuneration from those who are bound, not only by the dictates of a rational humanity, but by the laws of the country, to provide the

necessary assistance for the destitute sufferers.

"There is yet another reason for suspecting the real advantages of the gratuitous services of our body, viz. the effect which is thereby produced on the poor themselves. It cannot be denied that a great proportion of the attendance afforded by the medical charities of this country, tends to perpetuate the injurious habit of dependence upon others for the supply of necessaries which, by timely forethought and frugality, the working classes might procure for themselves: and it is no less obvious, that benefactions which were intended for the relief of the indigent, are frequently applied for the assistance of those who do not really require them; and who have no legitimate claim on the unrewarded exertions of medical practitioners. Your Committee are, therefore, of opinion, that a well-regulated supply of medical relief, the cost of which should be defrayed from the legalized provision for the relief of the poor, is, on the whole, the most unexceptionable mode of extending to proper objects the aid in question.

"A second point for consideration is—who are the poor to be thus relieved?

"It is exceedingly difficult to define exactly the class for whom this benefit is to be provided by the community. In general terms, however, it is sufficient to say, that those who are unable to procure medical advice and medicines, by payment of the usual specific charges (which for the lower classes have always been moderate), and who cannot defray these charges, or offer equivalent for them, by joining a well-regulated system of mutual assurance, must, when ill, be thrown upon the public. There appears every reason to suppose, that by the operation of the new Poor Laws, the number of independent poor will greatly increase; and that from this cause, no less than from the general establishment of Provident Institutions among the labouring classes, a far smaller proportion of the population will remain dependent on the public than heretofore; and this change will, doubtless, be as beneficial to our body as to the rest of the community. We do not, as is represented, seek either 'profit or popularity' from the continuance of abuses which have proved to none more injurious than to ourselves.

"With every disposition, therefore, to look favourably on the diminution of pauperism, it appears to your Committee inevitable, that there will always remain a certain portion of the population who must be supplied with medical aid by means of the poor-rates. To quote from a well-known writer (Dr. J. P. Kaye), who is now a Commissioner under the Poor Law Act—'A certain amount of suffering and helpless misfortune will ever be produced by the accidents of life. The most vigilant foresight cannot always discern impending calamities, nor the utmost activity always secure a provision for old age or continued sickness; some there will ever be weaker than the rest, who will fall, or be thrust aside, in the common struggle for maintenance, and who, having failed after honest endeavours, become the proper objects of a discriminating charity.'

"Medical attendance, indeed, of all the necessaries of life, is the least likely to be provided for by the poor themselves, and yet the applications for it are the most urgent and pressing: a larger proportion of the poor will then, doubtless, continue dependent on the public (especially in the rural districts) for this benefit, than for 'relief in money or in kind.' It becomes, therefore, a matter for after-consideration, how the inability of the poor to provide for themselves shall be determined upon in particular cases; and it is quite reasonable to concede, that the authorities constituted to decide on the destitution or pauperism of applicants for *relief in general*, should also decide upon it in the matter of *medical relief*. The principle of the new Poor Law is, to make the labourer more provident, and, therefore, must be approved by every well-directed mind; but whether such a principle can with justice be carried out, in the cases of the *infirm*, the *aged*, the *sufferers* from sickness and from accident, *who have no power to recal their past negligence*, is more than doubtful, for this would be, in fact, to give the law a *retrospective effect*. The decision, therefore, in every instance, is one requiring the exercise of great humanity, discretion, and a thorough acquaintance with the habits and wants of the poor.

"The third question is—what kind of medical attendance should be provided for the paupers?

"Your Committee are fully assured that they convey the sentiments of the wise and good of all parties, in urging that the assistance so afforded should be of the very best kind that the various localities can furnish. It is no less the interest than the duty of the rate payers or their representatives, to select the most

skilful and efficient medical advice, for those who depend on them for its supply.

"The numerous cases of protracted disease which may result from tardy, or inefficient medical treatment, and the consequent dependence of the sufferer (perhaps for life) on the parochial funds for support. The spread of contagious disorders, which by timely precautions may be averted, suggest motives which might influence the most sordid. But the aggravated forms which disorders assume in the pauper class, the want of those auxiliaries which the wealthy possess, to alleviate the pain and render tolerable the endurance of disease, seem to dictate, in these cases, a more special exercise of the generous and humane principles of our nature. To refuse, therefore, help to those who, in the time of absolute need and destitution, apply to the authorities for medical relief; or to delay it by interposing unnecessary distance and official impediments, between the patient and the advice he seeks; or to supply it from an inferior or a distrusted source; and all this under the specious plea that the poor must be driven, by these obstacles and this second-rate relief, *to depend on their own resources*, constitutes a theory and practice deserving only of universal reprobation. It might well form part of a code of Draconian severity, in which improvidence and thoughtlessness might be punished by slow torture or by death.

"The office of parish surgeon should combine the highest qualifications of the medical body; it being clear that no professional responsibility whatever, public or private, equals it in variety and extent. It embraces and presents, in daily profusion, cases in medicine, surgery, and midwifery, requiring as profound knowledge and diligent care as any public Institution affords for each of these branches singly. It should unite, therefore, an acute perception of the incipient stages of disease, with well directed efforts for its prevention, accompanied by the most diligent and scientific treatment.

"The last point for consideration in this part of the report is—who are to decide on the particular ailments of the paupers which require relief. It having been already agreed that the constituted authorities should decide as to the number and circumstances of the class who are to be supplied with medical aid at the public charge, it seems equally plain that the members of the medical profession alone are competent to judge of the necessity for medical treatment in any particular case occurring in this class.

"No one could defend a regulation which entrusted this delicate and important decision to a subordinate, and a necessarily ignorant, functionary. If the medical attendants of the poor are selected not only from a confidence in their professional abilities, but from a conviction of theirintegrity, they ought to be freely entrusted with a discretionary power, which they alone are able to exercise. And after all, in this matter, the authorities *must* rely on the *honour* of their medical officer. Hence the importance of an acquaintance with the character, and a full confidence in the moral rectitude of that medical practitioner, who is chosen to undertake the medical care of the paupers."

PUBLIC MEDICAL REPORT IN IRELAND

(*Continued from page* 192.)

We resume our analysis of the Report before us, as it cannot fail to lead to legislative improvement in the medical charities of Ireland. It is an abridgment from the comprehensive, laborious, and expensive work of Mr. Phelan, the production of a private and philanthropic surgeon. It led to the government interference, and to the Report which we place before our readers.

We now proceed to conclude the Medical Commissioners' history of dispensaries.

"3. Some evidence of the necessity, of the utility, of the particular charity, of the number of its applicants, of the good it had done, must be submitted to the grand jury, before a new county grant can be obtained. Hence arises the indiscriminate admissions, nay, even the courting of the poor, of every class and from every quarter, to become patients and swell the lists, where lists are kept; and, where they are not, to give a colouring to arbitrary statements of numbers.

"Annual or half-yearly returns are made out, purporting to specify the numbers 'relieved, cured, died, remaining on books,' &c. But many of the returns are not founded on the registry of the patients; some are exaggerated; some purely arbitrary and fictitious, no record of any kind being kept.

"Some are confessed to have been drawn up merely *pro formâ*, to satisfy the grand jury, whilst almost all their

authors admit that the results of dispensary practice cannot be accurately ascertained.

"In one case, deliberate and detailed professional statements are printed and put forth, calculated to excite alarm as to the sanitary state of the district. But though purporting to be based upon the records of the medical practice of the charity, these statements were found to be disproved by the records, irregular and arbitrary as these were.

"4. The aggregate of the nominal sums alleged to be received, every year, from private subscriptions, together with that of the real sum granted from the county rates, must be accounted for to the grand jury. The amount of both, say 150*l.*

"An account is furnished annually, made out, in most cases, by the medical attendant, but signed by the official treasurer. Credit is of course given for both sums.

"It has been settled by the committee of the charity, that the salary of the medical attendant shall be the balance of the whole income, or shall approach as near 100*l.* per annum as the income will allow, after paying all other expenses. The committee order and pay for the medicines required.

"In one case of this description, the whole charge for medicine for the year, for 800 patients, was only 8*l.* 15*s.* for both parent and branch dispensaries.

"5. The salary is fixed for the medical attendant at 75*l.*, or rather he fixes it so for himself, having the sole management of the funds, and being obliged by contract to furnish all the medicines required. In this case, 55*l.* are charged for pills, powders, draughts, &c. for the patients in one year, whilst the remaining 20*l.*, with 4*l.* or 5*l.* over, are charged to rent of house, repairs, sundries, &c.

"The grand jury grants the usual equivalent; and this flagrantly ill-managed charity goes on as before, neither ledger nor any other record is kept to justify the charge.

"All the concerns of the charity are exclusively in the hands of the medical attendant.

"6. The medical attendant is conscientious and economical; his account correct; the committee zealous; the subscribers payers; the sick poor faithfully and humanely attended.

"There is a balance at the end of the year of 25*l.* in favour of this institution. The grand jury diminish their grant by that sum. Next year there is still a balance of 5*l.* The original amount of the county grant is reduced by 30*l.*, or by a still larger sum, if the subscriptions of the charity have increased. The third year the institution is in debt; subscribers withdraw; the committee relax in their attention; the medical man sees that integrity and economy are worse than useless, and he either becomes needlessly expensive, or the charity falls from want of funds; whilst other charities of the same class, not burdened with the virtues that had ruined this, go on as usual. Grand juries have not time to examine details, and are therefore not fitted to exercise that discriminating superintendence which would be likely to render charity most efficient.

"7. The grand jury is liberal, the subscribers solvent, the means of the charity ample; but the committee leaves every thing to the medical attendant, an apothecary, with an open shop in the village.

"The annual account contains long bills from Dublin druggists, besides large quantities of lard for ointments, spirits for tinctures, leeches, and *sundries*, bought on the spot *to save carriage*. There is, however, no balance, or else a small one, against the charity.

"8. A remote parent or branch dispensary is got up, perhaps on a patron's estate, or close to his demesne; many of the subscribers merely nominal. The medical attendant resides in a distant town, from four to fourteen miles off. The dispensary house or room is opened once, or at most twice, a week. The whole of the medical materials contained in it are not worth 5*l.*; sometimes they are not worth 1*l.*; yet in one case of this kind the charge for their carriage alone would make their weight *eighty-six hundred* for one year.

"9. Salaries vary with the amount of annual income. Dispensary held in surgeon's house. No committee meetings.

	L.	*s.*	*d.*
Surgeon's salary for 1833, 100*l.* } Apothecary's ditto for ditto, 20*l.* }	120	0	0
Income for 1833	115	18	6
Leaving	4	1	6

less than nothing to purchase medicines for the sick poor of that district."

It would not be difficult to medical factotums in our English dispensaries, and even in London it does happen, that the medical attendant acts as physician, surgeon, apothecary, and treasurer, and puts all monies into his own pockets, after paying the landlord, druggist, and housekeeper.

"MIXED ABUSES, PROFESSIONAL AND FISCAL.—*The Getter-up of a Dispensary.*—10. A person practising medicine in a village, but having no diploma nor public professional certificate of any kind, takes advantage of the silence of the Dispensary Acts upon the subject of medical qualifications, gets up a dispensary, sets down the names of his patients to whom he furnishes drugs, as subscribers for sums as low as 2*s.* 6*d.*, and even 1*s.* per annum; he obtains an equivalent county grant, becomes cash keeper and collector, makes all disbursements, audits his own accounts, pays to himself the rent of the dispensary, (his own house). 33*l.* 16*s.* 2*d.*; collects the subscriptions of his subscribers, or rather the debts of his patients, and balances his annual accounts with a charge for such an item as "bottles and lapping paper."

"11. A patron gets up a dispensary to serve the poor, and serves a young friend at the same time, by having him appointed as the medical attendant under the act referred to; but the young man has not completed his education. The salary and emoluments of his new appointment enable him to employ a deputy, and obtain his diploma, or even to pay the expenses of graduating in Arts at Trinity College, Dublin.

"12. A medical man settled in business has an influential relative residing near him; there is no district unprovided with a medical charity nearer than ten or twelve miles; he procures twenty or thirty names as subseribers, through the influence alluded to, but unconnected with the district. An equivalent is obtained from the county rates; a dispensary is got up; a deputy is hired at a trifling expense, because he is unqualified. The ostensible medical attendant continues to reside at the distance mentioned, but arranges the money business of the concern with the grand jury.

"13. A practising apothecary obtains exclusive control over a charity richly and powerfully supported. He has kept no record of any kind for several years. The only machinery is a nominal treasurer, an annual account, and a purely arbitrary return of patients. The open shop is the dispensary room. The medicines, charged 60*l.* for 1833, are given to the sick poor, or sold, as occasion demands, from the same drawers, pots, and bottles. The usual statement of the numbers "cured, relieved, on the books," &c., laid before the grand jury for that year, contains the words "*Cured*, 2061." The salary is 100*l.* per annum. The funds are unable to meet the charges. The deficit is taken from another charity, of which the apothecary is also medical attendant.

"Other examples of abuses of various kinds, in this class, might be quoted from our Reports; but there are also many examples to be found there of dispensaries to which the highest, as well as the middle ranks of the district, contribute a liberal portion of their means, and, what is still better, of their time, intelligence, and moral weight."

We now come to a part of the Report which is accordant with the wonted beneficence of the profession, and which pourtrays the good done the public by able and learned practitioners.

"Examples in which we found the medical attendants talented valuable men, doing much good to the poor, and much credit to humanity, as well to their own profession.

"FEVER HOSPITALS.—A practising apothecary pretends to be an M.D., and is appointed sole physician. There is no active committee; no accounts, nor records even of deaths kept. There are seldom more than two patients in the house, often not more than one, and that one is kept in the house and on the books for *six consecutive years* at the expense of the charity.

"Although the name of *Fever Hospital* generally deters committees from the actual inspection or superintendence of this class of institutions, and therefore may be supposed favourable to abuses, yet many of these charities are conducted in as efficient and satisfactory a manner as their limited and uncertain funds, and the principles upon which they are based, will admit.

"One we found had been built, and hitherto liberally supported by individual benevolence. In another the zeal and humanity of the highest and most influential member of the committee brave the danger of infection, to insure fair dealing to the sick poor.

"In some, the leading physicians of the town do the duties both professional and fiscal gratuitously, yet most efficiently. In one case a single physician, by his individual exertion and great moral influence, has established and kept up for many years, under peculiar difficulties, one of the most truly and practically useful hospitals of this class which has fallen under our notice.

"DISTRICT LUNATIC ASYLUMS.—Although the abuses which we have had

occasion to notice in this class are not numerous, yet as they operate upon a much larger local capital than those alluded to in the preceding classes, they are of greater individual importance in a fiscal point of view.

"From ten to twenty acres of farm or garden ground belong to an asylum, and are within its inclosure. Gardeners and labourers are hired at high wages; the patients do all or the chief part of the work required. Independently of charges for seed, potatoes, wheat, barley, farming implements, &c., *garden seeds alone* are charged betwaen 20*l.* and 30*l.*

"The produce has been considerable, and may have saved to the public its value in feeding the lunatics; but the only credit given in the accounts of the institution amounts to a few shillings for 'vegetables sold.' In short, there is only a debtor side to the farm and garden account.

"From six to twelve or more large pigs, besides geese, turkeys, fowls, &c. are kept in the asylum. They are tended by patients, fatted upon the produce of the farm and garden, or upon the purchased provisions, but are sold for the private benefit of the manager.

"The expense imposed upon the counties (in some cases almost at the discretion of the district manager) to support the present mode of keeping and treating the lunatic poor, is much too large, more especially when compared with the assessments authorized in Ireland for the relief of the other descriptions of sick poor, and for that of the same description of such in other countries.

"The institutions of this class, however, viewed as a whole, are highly creditable to the country, and afford a strong proof that public charity, to be efficient and respectable, must be compulsory; and to be rendered suitable to its purposes with due economy, ought to be subjected to minute disinterested superintendence."

The next part of the Report contains suggestions for the improvement of the present system of medical relief in the sister country, and embraces many important hints on the subject.

"When public funds, intended for the relief of the sick and impotent poor, are subdivided into small portions, as in the case of dispensaries—when each of these portions is placed by the law under the separate management of local committees—when the amount of these funds respectively depends upon mere contingencies, viz. private subscription, real or nominal, and the pleasure of the local grand jury, the very uncertainty and smallness of the means, and the conviction, or suspicion, that a greater or less portion of them is fictitious, tend to place these charities below the attention of the wealthy, as in the county of Mayo; to damp the zeal of the truly public-spirited and humane; and ultimately to throw the entire control into the hands of some selfish interested person; most generally into those of the medical attendant.

"Yet these dispensaries profess to be the offspring of pure local charity, soliciting the support of the community, and holding out private voluntary subscriptions as a pledge of their sincerity.

"Such a system of public relief left uncontrolled by competent superintendence, besides producing the abuses of which we have given so many examples, must serve also to diminish the stock of public integrity, and to reduce to the very smallest fraction compatible with the existence of the abuses themselves the portion of relief which actually reaches the sick poor.

"The institutions which, it may be said, are forced upon the community by the Government, such as the new gaols, (now in some instances become a source of relief to the poor), county and city hospitals, and district lunatic asylums, with all their defects, are by far the most respectable, and therefore, perhaps, the best looked after of Irish public charities.

(*To be continued.*)

RECEIVED FOR REVIEW.

The Cyclopædia of Anatomy and Physiology. Edited by R. B. Todd, M.D. Part VIII. Sherwood and Co.

Facts and Cases in Obstetric Medicine, with Observations on some of the most important diseases incidental to Women. By J. T. Ingleby, Lecturer on Midwifery at the Royal School of Medicine, Birmingham. Longman & Co.

Analytical Anatomy; the Circulation of the Blood. as found in the Human Fœtus, and compared with that in the four classes of Vertebral Animals. By G. J. Martin Sainte Ange, and translated by T. W. Jones, M.D. A splendid coloured plate, with 28 figures.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE IX.

Special Consideration of Henia.

You are to observe, gentlemen, that although I have sometimes been obliged to refer to particular cases of hernia with a view to establish certain general points appertaining to the disease, I have not yet descended to the special consideration of any of those forms known by the names inguinal, scrotal, femoral, umbilical, ventral, &c. To an examination of these I am now severally to proceed. I shall commence with that which is most common in our sex, of which you have heard most during your dissections, and which I have the opportunity to illustrate by the various specimens of the disease now laid before you.

Inguinal hernia occupies the situation of the spermatic chord, and in development follows its course, until it arrives in the scrotum, where it receives its appriate denomination. There are two forms of inguinal rupture: one, the most usual, commencing where the chord pierces the fascia transversalis; the other, beginning nearer to the pubis, more immediately at the external ring, where its connexion to the spermatic chord is in the first instance set up. Now, this difference in ventral source is accompanied by dissimilarity in relation, and this is so perfectly material in an operative point of view, if none other was to be taken into computation, that it is perfectly necessary to consider each of these varieties distinctly from the other. Here are examples of both sorts of protrusion, and refer you to the injected epigastric artery, which you perceive, holds a different position with respect to each, and I do so, not for the purpose of present comment, but that I may seize your minds, and fix the possession I have thus obtained upon details, which unless made thus attractive, might awaken little interest, and of course be listened to, perhaps, with respect, yet assuredly without advantage.

I will take the disease as it most commonly occurs. I have only to refer to the collection before me, to determine my choice. Instances of one abound—examples of the other are few; and all being collected not only with a design to exhibit their pathological bearings, but also to prove their comparative frequency of occurrence, I must allow myself to be directed to the subject of first consideration by the testimony of numbers, especially when these memorials from the dead most exactly square with those evidences with which we are addressed by experience on the living.

It appears thus, that inguinal hernia usually commences at that point where we fix the commencement of the spermatic chord, that is, at the presumed ring or opening in the fascia transversalis. I use the word presumed, because plates misrepresent the true state of things, and the dissecter too often uses his misplaced skill to display parts of which students require to be informed, and many times for no better reason than because prominent authority announces appearances as natural, which dissection has distorted, and facts as ascertained, which most unpresumingly, I beg leave to say, have not been the subject of accurate examination. Here I desire to be understood merely to speak of an anatomical fact for the sake of accuracy, and not on account of its influence in practical proceedings, although it does seem to satisfy a point concerning

the development of this particular form of hernia.

And now, before I proceed further, you will permit me to bring your attention back to parts of which I never could speak as intelligibly as when they are displayed before your eyes for the present, and submitted to your examination when my lecture shall have been concluded.

The fascia transversalis lies exposed without any careless or designed dissection. I beg you to mark its extent. Observe, here is a white line, commencing about the middle of the crest of the ilium. It extends in an arch, towards the anterior highest spine of that bone, internal to which it lies at the distance of half an inch, and thence it continues to the pubis in the direction of, and internal to Poupart's ligament, to which it is united at the outside of the internal ring, and along which ligament its fibres pass to the tuberosity of the pubis. Taking these as its fixed attachments, I would say that this fascia extends over the peritonæum, as high as the margins of the diaphragmatic ribs. Above the ilium, and in an anterior direction, the fascia transversalis is composed of many laminæ, of which the most interior seems to be lost on the peritonæum, and near the linea semilunaris it is so thin and delicate as not to differ from cellular substance. It is proper to add, that this substance passing beyond the boundaries of the abdomen, is continued to some short distance upon the femoral vessels, especially near the ilium, and along Poupart's ligament, the structure is fibrous or tendinous, and about three quarters of an inch above the centre of the latter part it is interrupted by the opening, usually now called the internal ring.

This aperture is oval, its greater apex being disposed in a vertical direction. Measuring the distance of its middle from certain points, it is found to lie an inch and half to the iliac side of the external ring, and something less than three inches both from the symphysis pubis and from the anterior superior spine of the ilium. You see, the external and inferior border of that opening is strong and well defined, but that above and internally, the membrane being thin and delicate, its margin is marked with less distinctness. The length is an inch and half, the breadth seldom exceeds half an inch. A thin layer of membrane descends chiefly from its superior border upon the chord, forming one of the ligaments, giving strength to this part of the abdomen, and presenting the defined appearance, against the existence of which I contended in the commencement of this lecture. A vein and artery are now seen lying between this fascia and the peritonæum. These are the epigastric vessels. They are large, and their relations are of importance, so that it is not out of place to observe, that the artery which springs from the femoral turns in an arch forwards, upwards, and inwards, towards the pubic extremity of the rectus muscle, and in this course crossing behind the spermatic chord, it subsequently passes along the internal margin of the internal ring.

In this concise review of these parts, the spermatic chord is entitled to much consideration. For descriptive purposes it may be divided into three portions: the abdominal, the extra-abdominal, and the part which intervenes. The supposed limits of each of these is sufficiently pointed out by reference to the rings. The abdominal portion is formed of two principal things, one, a cellular envelope, embracing the blood-vessels and nerves, which descend from the loins, and lie behind the peritonæum; the other, the vas deferens, which rises out of the cavity of the pelvis, turns over the internal border of the ring, lies anterior to the epigastric artery, and joins the former in that fascial opening here exhibited. The extra-abdominal division descends from the external ring, almost directly to the testicle. It is composed of the parts enumerated, with a slight vascular addition, tied together by lax cellular membrane, and invested by the cremaster muscle; the fascia derived from the extenal ring, the superficial fascia, and the integuments. The third, or intervening portion of the chord, is situated amongst the abdominal walls, in a canal terminating at these two apertures, and being almost immediately above Poupart's ligament; the extent is an inch and a half, and the direction is inward, that is, towards the linea alba, downwards towards the pubis, and forwards towards the integuments of the penis. In this course it lies superficial to the fascia transversalis above, and to the combined pubic insertions of the internal oblique and transversalis muscles inferiorly, covered in its descent by the fascial ligament derived from the internal ring, by the transversalis, internal oblique, and the tendon of the external muscle.

Here the cremaster muscle is not to be overlooked; you observe its fibres are

mainly derived from the internal oblique, but you remember to have seen accessions from the transversalis, and occasionally from Poupart's ligament, when it is concealed by the passage of the chord. Issuing as it were from these sources, the cremaster descends, with tortuous and swelling fibres, as low as the tunica vaginalis testis, with which it is intimately united.

Now you are to understand where an inguinal hernia is incipient, while it is yet small and recent, that it uniformly lies on the anterior surface of the spermatic chord, in the canal of passage from the abdomen, interposing between that body and the natural superficial relations we have just reviewed, and in the scrotum, separating it from the anterior part of the cremaster, by which muscle it is both diverted and enveloped in this portion of its extent; and you are also to know, when the volume of a hernia is considerably increased, whether suddenly or by a gradual progression, that the constituent parts of the chord are sometimes separated away from one another, and may then be found spreading on the posterior surface, or even on the sides of the tumour. In the greater number of these preparations, what I may call the natural relations, are preserved; but in this one they are altered, and they hold situations which you would scarcely understand, were you not then assisted. I have seen unusual relations in ordinary herniæ of inconsiderable bulk; so that it may be inferred, that the distension caused by magnitude is not necessary to these productions.

During a slow development of inguinal rupture, little other change takes place in the inguinal canal than mere dilatation, by which it is affected throughout the extent to which the protrusion reaches; but if the disease is largely, violently, and suddenly augmented, a morbid action is induced in certain parts, and this leads to consequences upon which we can calculate with pathological certainty. Of this fact you have here many proofs; but I do not propose to do more than to allude to them at present. You observe the hernia has barely escaped through the external ring, and yet both it and the internal one are enlarged, their borders are rounded, thickened, and the internal opening especially is more defined than natural. In another specimen, the hernia has passed nearly as low as the testicle; and yet the state of the canal corresponds in every way with the characters of the last preparation. Now in this third example, you find a striking contrast to both the former, original distinctness of parts is here confused, and separation can scarcely be accomplished, except by a master's hand. Boundaries which you have seen me demonstrate, are no longer to be traced, and openings, once distinct from each other, are here found to coincide. Force of distension and violence of impulse are the agents by which these changes have most probably been brought about, aided perhaps by the power of external pressure, which we cannot doubt in some instances has been employed. However applicable this explanation may or may not be as to the efficient cause of these changes, which here solicit a careful inspection, it is plain that they exist, and it is scarcely less evident that a knowledge of them is of much moment, inasmuch as it is required by almost every step we take in the way of practical proceeding. Had I lost any opportunity of explaining these matters in detail, it would be my duty to set them now before you, with a minuteness equal to their importance; but feeling this to be unnecessary, from a consciousness that I have not failed, on every occasion favourable for your instruction, I am now content to advert to those circumstances most essential in a purely surgical point of view.

Amongst these I will first beg to direct your attention again to the epigastric vessels, and in so doing I propose to speak with reference to these two preparations, selected because they illustrate extreme conditions of parts with which an operator requires to possess an accurate familiarity. This jar contains a very small hernia. It has just escaped through the internal ring, which it seems to have dilated, but not to such a degree that the epigastric artery and sac maintain a contact with each other. Cellular substance is still interposed between them, and the injected vessel holds a course perfectly undisturbed by the presence of the protrusion. Now, this jar holds a scrotal rupture of ordinary size, and of considerable duration. Here there is a very remarkable change in both the direction and relation of the artery. For here you cannot but notice its very circuitous course, and its near approach to the tuberosity of the pubis, at the same time that it is found to encircle, with intimate closeness, more than a third of the neck of the sac, at the inferior and internal boundary of the opening, which it fully occupies. Between these preparations one

further difference exists. In the first, the length, dissection, form, and dimensions of the spermatic canal remain; but in the latter these are altered to such an amount, that every margin described in the outline given of the trajett of the chord is lost in coincidence, and a direct immediate communication is found between the external tumour and the abdominal cavity. How it happens, that so many distinct parts are brought into this correspondence, is a subject to awaken curiosity, so that I am induced to believe you will with satisfaction receive the only explanation I am competent to give you. The nearly cellular structure, which constitutes the internal and lower border of the innermost ring, disposes it to yield in that direction to which the pressure of a large hernia is most constantly applied, while the outermost border of the external ring, slightly defended by a thin fascia and transverse fibres, is well calculated to yield to a force which the resistance of the pubis must of necessity direct against it. Now, here we have two eliptical openings lying in nearly parallel planes, with their greater axes disposed in the same direction, so that it becomes evident, if the extremities in both, which are nearest to each other, be produced in opposite directions, the produced border of each will finally fall on the fixed border of the other. To me, this explanation is clear; by you, it may not be comprehended. But here is a practical illustration of all I mean. I now slit up the external ring in the direction of its fibres, and I divide the internal ring by an incision leading to the pubis. This experiment has reduced both openings to the situation in which they were in this preparation, the last exhibited; and, in my opinion, it is well calculated to remove obscurity from the demonstration I attempted, before this simple method of satisfying your senses occurred to my mind.

I have already informed you, that herniæ form slowly, and that a considerable period often elapses before any unusual prominence is perceived. At the same time, I told you that from this state of latency they often burst suddenly into external swelling, obedient to the force of severe, unreduced, or unexpected violence. In its descent through the inguinal canal, this form of hernia is frequently for a long time delayed at some distance from the external ring; and in this stage of its growth it constantly escapes observation. The experienced eye, however, readily discerns an oval fulness, impelled by coughing, retiring under pressure, disappearing under recumbency, and returning when the erect posture has been resumed. If we attend to the effect of a succession of respiratory impulses, we shall see it alternately advance towards and withdraw from the external ring. But the limits to which it can pass are determined by the fascia which the chord receives from the fascia transversalis, and it is not unlikely that resistance is increased by the inferior border of the obliquus internus and the cremaster muscles. When the external ring is passed, the tumour swells directly forwards, and opposed by the integuments, thus it spreads over the margins of that opening. As bulk is augmented, the direction is altered, and the hernia now descends in front of the chord. In this progress it appears to be once more arrested, and is again for some time delayed below the ring, I presume in consequence of a close attachment of the cremaster muscle, and of the fascia-like covering produced from the pillars of the external ring. Finally, it arrives at the tunica vaginalis testis, where a permanent barrier is opposed to its descent by tne intimate union existing between that membrane and the muscular fibres attached to it. To this last circumstance is mainly attributable the position in which the testicle is usually found. Here are ten examples of scrotal hernia, and in all, the relation I have mentioned is preserved. In some, the testicle is immediately below; in those of larger size the tumour lies forward, and this places the testicle more in a plane with the posterior rather than the anterior surface of the scrotum. In cases of extraordinary growth, such usual bearings of the parts will be destroyed, and they will be driven into positions on which we cannot calculate.

If the phenomena characteristic of hernia, as lately and more than once set forth, be attended to, a mistake cannot be incurred in reducible cases of any of these stages of the disease of which I expressly treat. Things, however, do not always exist in this state of simplicity, so that it is surely right to take some notice of affections to which this same region, occupied by this form of hernia, is occasionally exposed, that we may provide against confusion and embarrassment, which would otherwise arise. On many subjects fancy is most successful in her creation of doubts and difficulties. We

are too frequently allowed to perplex and alarm ourselves by an appearance of reality, deceived, I may say, from traditional repetition. But these fears fade before experience, whose province it is to distinguish between what is common and what is rare, and to weigh most things according to the judgment of its own personal conviction. I am therefore not going to furnish you with a lengthy catalogue of maladies to which the region of the chord is liable; I will review these which I have most generally met with, and I will endeavour to show you the clearest way by which they are to be distinguished from inguinal and scrotal hernia.

Application of Auscultation and Percussion of the Diagnosis of Diseases of the Lungs.

(Concluded from p. 179.)

PLEURITIS—PLEURISY.

Inflammation of the external covering of the lung, or pleura, is termed pleuritis. This may attack the pulmonary and costal pleura, when it is called *general* pleurisy, or it may be confined to a certain part, and then it is designated *partial.* It is also called *interlobular, diaphragmatic,* and *median,* according to the site of the inflammation.

Pleuritis, like peritonitis, and every other inflammation of serous membrane, offers alterations of the pleura itself, and changes in the fluids secreted by this membrane.

When there is only a simple congestion of the pleura, or the subjacent cellular tissue, percussion does not enable us to detect any abnormal noise, unless the condition continues for several days. In such a case percussion will yield a dull sound, more or less considerable, according to the density of the inflamed tissues, as first noticed by Corvisart, and since verified by Raciborski and others.

There is generally acute pain in pleuritis, which prevents the patient from expanding fully the affected side of the chest, and consequently the air enters in less quantity into the corresponding lung, and the respiratory murmur is more feeble than in the unaffected side of the chest.

When the pleura secretes coagulable matter, this matter is speedily converted into false membrane, which covers one pleura (pulmonary or costal) to a greater or less extent, and sometimes unites the one to the other. It is now demonstrated, by the experiments of M. Reynaud, that during inspiration, the pulmonary approaches the costal pleura. If, therefore, the pleuræ are covered with false membranes, these rubbings against each other during each movement of respiration, will cause an abnormal noise, which is termed *frottement* (friction).

This noise is sometimes varied, and is so slight that it scarcely deserves the name of frôlement—grazing slight touch. It may resemble the new leather sound, and in such case the autopsy has shown the existence of a slight, fibrous, false membrane, uniting both pleuræ. At another time, it closely resembles the sonorous or fine crepitant wheeze, and in these cases the very superficial origin of the wheeze or bruit, as well as the possibility of hearing the respiratory murmur in the same situation, were the reasons for explaining its presence by the existence of false membranes; an opinion which was further corroborated by other signs of pleurisy.

When these different noises are well marked, the hand applied to the parietes of the chest, will feel vibrations during the movements of respiration.

If the fluid secreted by the inflamed pleura does not form false membranes, effusion takes place into the cavity of the pleura or chest, which, on account of its gravity, falls to the lowest part of the cavity; so that if the patient is in the upright posture, it descends behind the pillars of the diaphragm, near the vertebral column. Its presence is detected by the dull sound afforded by percussion in this part. But it is to be remembered, that this dulness of sound is never so well marked as that of pneumonia in the second stage.

A small quantity of fluid in this region may rise to a considerable height, on account of the very narrow dimensions of the inferior part of the cavity of the pleura. This circumstance should be taken into consideration in estimating the quantity of the fluid.

In some cases, the fluid will occupy only two or three inches in extent, and the diagnosis will then require considerable attention.

We may readily distinguish the dulness of the effused fluid from that of the liver, both by the greater resistance of the latter, and by its more remote position from the spinal column. The difference between the dulness of sound of the spleen and that of the effused fluid, will not be so remarkable. But it is sufficient to presume the presence of fluid, to find

dulness of sound near the vertebral column, between the median line and the spleen; a region which in the normal condition yields a clear sound, in consequence of the presence of a thin lamina of lung.

When the fluid is not in considerable quantity, the parietes of the vesicles compressed by the effusion, approach each other and efface their cavities. The air no longer enters into the vesicles; we cannot hear the respiratory murmur, but the bronchic souffle only.

If the fluid is so considerable that it nearly fills the cavity of the pleura, we cannot hear the respiratory murmur or bronchic souffle, except along the vertebral column, against which the lung is compressed. But in proportion as the effusion diminishes, the bronchic souffle reappears, ægophony is heard; but when the effusion is absorbed, these two signs disappear, as well as the dulness of sound, and are succeeded by the normal signs.

On attentively examining patients with moderate effusions, we sometimes hear a particular noise or sound, very similar to that produced by an aspiring pump (*bruit de pompe aspirante*). It resembles the noise made by elevating the piston of this kind of pump, when its body only contains a small quantity of liquid. But we must not confound this noise with that of the intestines.

When the effusion only occupies one side of the chest, the pulmonary vesicles on the opposite side will be expanded, in consequence of performing the function of the compressed lung; and the respiration will be puerile, or louder than normal, like that of a child.

If a patient, affected with effusion in the cavity of the pleura, speaks in an ordinary tone, and the hand is placed on the parietes of the chest corresponding to the fluid, it will only feel very slight vibrations, or even none at all, though these vibrations are very perceptible in a healthful state of the lungs.

When the ear is applied over the part of the chest corresponding to the effusion, and the patient is desired to speak, his voice resembles that of a goat, and for this reason Laennec named this shrill resonance ægophony. This sound depends upon the vibration produced by the voice, in a membrane, and results from the compression, and juxta-position of the most superficial vesicles. This membrane only vibrates when it is thin, and ægophony therefore only exists when the effused fluid is in moderate quantity.

The possibility of hearing the crepitant wheeze in patients, who present ægophony at the same time that they are labouring under the first stage of pneumonia, also proves that the compression only extends to the most superficial air vesicles.

Ægophony is not always so well marked that we can easily distinguish it from bronchophony. Some persons in ordinary health have the voice so broken, that it is easy to confound it with ægophony. We should therefore consider, that this last sound is occasionally but an auxilliary sign.

The defect of the vibrations of the chest during the emission of the voice, is but very slight in the parts corresponding to the effusion, and is more distinct in proportion as the quantity of the effused fluid is less considerable.

The bronchial souffle and dulness, characteristic of ordinary effusion, are likewise present in the second and third stage of pneumonia.

But notwithstanding this coincidence, the two last signs are by no means equivocal. For if a patient in whom we have found the bronchial souffle and dulness posteriorly, and in the upright position, lies on the abdomen, the fluid will fall on the anterior part of the chest, which is now the lowest, or most dependent. The dulness and souffle will now disappear posteriorly, and will be replaced by the normal signs, or by characteristic râles, if the bronchi or pulmonary parenchyma is affected at the same time that there is effusion in the cavity of the pleura.

If the patient, thus lying, approaches the edge of the bed, and we percuss the anterior part of the thorax, which is the most dependent, and which yields a clear sound in the erect position, it will now afford a dull sound, in consequence of the presence of the fluid.

When the anterior and posterior examinations are repeated alternately, and at different times, there will be no doubt as to the nature of the morbid condition.

If the patient should be placed on the abdomen, we must not mistake the dull sound of the heart, as this organ, in this position, is applied over a greater extent of the parieties of the chest, for the dull sound of the displaced effusion. This remark was made by M. Piorry.

But the displacement of the fluid does not occur but in cases of moderate effusion. If one side of the chest is completely filled with fluid, the effusion cannot change place, no matter what position the patient may assume. But in this

case, the progress of the disease, combined with the absence of the respiratory noises and of the vibrations of the voice, as well as in connexion with certain rational signs, will throw light upon the diagnosis, and enable us to distinguish an effusion in the cavity of the pleura, from a chronic engorgement of the lung, with which it might be confounded.

There are other circumstances which may still further augment the difficulty of diagnosis, of an effusion in the cavity of the pleura.

If the false membranes retain the fluid on all sides, it will not be displaced by the patient changing his position. In this case, the souffle and dulness, which characterise effusion in the pleural cavity and hepatization of the lung, losing the distinction that existed between the two cases, cannot remove our doubt, or in other words, their immobility in both cases, would lead us to suppose that the disease was hepatization.

It sometimes happens, that the fluid is thus retained at the anterior part of the chest. In this case, the lung is not pushed inwards against the vertebral column, but towards the posterior part of the chest; we no longer find, as in other effusions, the signs of this disease posteriorly, but anteriorly; and the posterior surface will afford the normal signs. (Andral, Clinique Med. art. Pleurisie.) The difficulty of diagnosis is greatly increased, when the effused fluid is retained by false membranes at the summit of the lung, which is the ordinary site of chronic engorgement.

In some cases, the dulness of the pleuritic effusion extends along the anterior part of the thorax, as far as the præcordial region. Does the dulness of this latter region depend on an effusion of fluid in the pleuritic cavity, or in the pericardium? This question very often arises in practice, and it will be more easily resolved, if we reflect, that for the fluid contained in the pleura to extend in front of the heart, it must rise posteriorly nearly as far as the spine of the scapula. Convinced of this fact, whenever we observe an abnormal dulness of sound in the precordial region in the left side, with that of effusion not rising above half the thorax, we shall attribute the dulness of sound of the heart, to pericarditis with effusion, complicated with the pleurisy.

But there is still another circumstance, which can throw further light upon the subject. I refer to the noises of the heart, which are never so dull nor extended in pleuritic effusion as in pericarditis. The former effusion scarcely ever covers the entire heart, it rather pushes it beneath the sternum, where we can hear the superficial bruits. But it is still doubtful, whether the dulness of sound in the precordial region is caused by pericarditis, or effusion into the mediastinum.

It was impossible to form a correct diagnosis of pericarditis before the discovery of auscultation; and there are many cases even now, in which the distinction is made with great difficulty. If, with a dulness of this kind, we at the same time distinctly and superficially perceive the normal noises of the heart, we may be certain that it is the mediastinum which contains the effused fluid.

But if the mediastinal effusion is more considerable, if it compresses and removes the heart from its normal situation, the dulness and distance of the noises of the heart might lead the examiner to conclude, that there was pericarditis with effusion. The error will be more readily fallen into, if we hear any abnormal noises during the pulsations of the heart, which may readily happen, when, in consequence of the compression of this organ by effusion in the mediastinum (median pleurisy), its orifices also become contracted. (Bouillaud, Dict. de Med. in 15 vol. art. Pericarditis).

In some cases the effusion follows interlobular pleuritis, and it is retained in a pouch, the parietes of which are formed superiorly and inferiorly, by the inflamed interlobular pleura, and completed by thick false membranes, which extend from one lobe to another. (Andral, Clinique Medicale, tom. 2.) If the inflamed pleura secretes serosities with gas the latter will obviously occupy the superior part, and its presence will be recognized by the great clearness of sound, whilst the fluid will occupy the most dependent part of the cavity of the pleura. On succussing or shaking the patient, we produce fluctuation of the fluid, which will be perceptible to the ear of the auscultator—a phenomenon observed even by Hippocrates.

Tubercles—Phthisis—Pulmonary Consumption.—Tubercles are morbid productions, most frequently round, of a yellowish white colour, and various in size, solid, but friable at first, softening afterwards, and transformed into a heterogeneous mass, which soon quits the pulmonary parenchyma, is evacuated by expectoration, and leaves no other traces in the chest than empty caverns or cavities.

When incipient tubercles are very small and few in number, they afford no particular sign which can be perceived by percussion or auscultation, except there is the complication of chronic pneumonia, or bronchitis, which was the primary affection, and gave rise to the tubercles, or when secondary, and caused by the irritation excited by these morbid products. It is much to be regretted, that as yet it is impossible to detect the presence of tubercles in the incipient state, or in the first stage of consumption; and there is reason to believe, that were this attainable, great benefit, if not a cure, might be effected by means of hydriodate of potass used internally and externally. I may here venture to offer a practical observation, that I have combined this medicine with demulcents in many cases of persons predisposed to pulmonary consumption, previously to the appearance of marked symptoms, and frequently with remarkable success.

When tubercles are incipient and small, they do not compress the parietes of the air vesicles to such an extent as to prevent the ingress of an appreciable quantity of air, and to cause the *bronchial souffle*, bronchophony, or the dull sound. It is only when the tubercles acquire a a comparatively large size, and that they form considerable masses, that percussion and auscultation enable us to presume their existence by the three signs just enumerated. But this insidious progress of tubercles is not the ordinary one.

It is under the form of chronic bronchitis, or pneumonia, that tubercles most frequently commence, more especially when a bronchitis, which gives rise to them, is neglected or allowed to advance into the extreme bronchial tubes and vesicles, and to produce chronic engorgement of the lungs, or chronic pulmonary hepatization.

These morbid phenomena may take an inverse course, thus the affection may commence in the pulmonary parenchyma, and then the bronchitis is consecutive.

When the disease commences by chronic hepatization, it is manifested by the signs of pneumonia in the second and third degree of that disease.

The acute or chronic state, is the only difference between pneumonia and tubercles. (Raciborski.)

Whenever these signs persist for a long time, and when the patient presents all the characters of a predisposition to tubercles, we may presume the existence of these morbid products.

Whenever tubercles are developing in one lung, the respiration is duller than natural, and becomes puerile in the opposite lung, for the reasons already stated.

The exact duration of the existence of tubercles cannot be determined in the present state of science. According to many eminent pathologists, they may continue for months, or years, without exciting any signs by which they can be recognised; while in in other cases, they develope very rapidly. Thus, I have known a lady in the upper ranks of life, who was pronounced in consumption by eminent physicians, and that she could not survive a week, and yet by attention to temperature and palliative means, this patient, though expectorating apparently purulent matter, and her complaint aggravated by every change of temperature, survived for twenty-two years. I have also known other cases, after pneumonia and typhus, in which tubercles developed and suppurated in seven or eight days, and evinced all the signs of the fatality of pulmonary consumption.

But in general, the appearance of tubercles excites irritation in the pulmonary parenchyma, and in women, during menstruation, the blood in place of being determined towards the uterus, is directed towards the lungs.

In plethoric persons of both sexes, there is congestion of the lungs after every cause which accelerates the circulation of the blood. It need scarcely be observed that such congestions have a dangerous influence on the progress of tubercles. Chronic inflammation of the pulmonary parenchyma, when rendered acutely severe, greatly facilitates the softening of tubercles.

When tubercles soften, auscultation becomes a valuable means of diagnosis. The softened matters of tubercles are enclosed in the air passages, and susceptible of displacemect; and we hear during respiration different râles, according to circumstances—the mucous, subcrepitant, and crepitant wheezes.

The same result is observed when tubercles are situated in the intervesicular cellular tissue. In this case, the suppuration of the tubercles destroys the parietes of the air passages, and makes them communicate with the site of the tuberculous matter.

The excavations are not as yet sufficiently considerable to afford, on percussion, the cavernous sound. And as the pulmonary engorgement still continues the essential element of the lesion, the

result of which is a dulness of sound in all the parts which afford the râles already mentioned.

When the destruction of the lung continues, larger excavations are formed, and these manifest themselves by new signs.

If the cavern is in a great measure filled with a muco-purulent fluid, secreted by the inflamed parietes, the secretion of this liquid during the passage of the air will produce gurgling, or the cavernous râle.

If the matter is completely expectorated, we no longer hear the gurgling; but the air, passing through the cavern, will resound more loudly, and produce a souffle called cavernous.

The voice of the patient now resounds with considerable force in the part corresponding to the cavern, and it seems to the observer to be transmitted directly to the ear through the tube. This last phenomenon is called pectoriloqy. It is always better heard with the stethoscope than with the ear, which arises probably from the circumstance, that the diameter of the stethoscope seldom exceeds that of the excavation, the anormal vibrations of the voice are transmitted alone to the ear, and are neither confounded nor enfeebled by the resonance of the voice in the surrounding parts.

It is important to know, that simple engorgement of the lungs, with considerable induration of their parenchyma, will give rise to a bronchial noise and a bronchophony, which perfectly resemble the cavernous râle and pectoriloqy.

Lastly, M. Raciborski attended a patient who was supposed to have a cavern. The bruit de pot fêlé was absent, and the supposed cavernous râle and pectoriloqy were nothing else than the bronchial râle and bronchophony. The supposed cavernous noise and pectoriloqy were replaced by the mucous râle, not caused by tuberculous softening, which further confirmed the accuracy of M. Raciborski's opinion.

On percussing the region over an empty cavern while the patient opens his mouth, we hear the bruit de pot fêlé. But this noise may also depend on dilated bronchi, and after copious expectoration may replace the cavernous râle and pectoriloqy.

When the cavern is very large, and almost occupies a lobe of the lung, auscultation affords the *amphoric* sound. If the cavern contains a certain quantity of fluid, we hear the metallic tinkling. These two signs will be more distinct when the cavern bursts into the pleuritic cavity. Percussion will also enable us to distinguish the quantity of gas and fluids in this cavity.

HÆMOPTYSIS.

Spitting of blood is caused by an exhalation of blood from the mucous membrane of the bronchi and pulmonary vesicles. The effused blood is displaced by the passage of the air, and gives rise to the mucous râle.

If the seat of the hæmorrhage is in the pulmonary vesicles, or if the blood exhaled in the bronchi falls into these organs, it forms clots which obstruct the cavities of the vesicles, and prevent the entrance of the air.

It is this last form that Laennec has termed pulmonary apoplexy. The sound over effused blood is dull, and on auscultation, we find the bronchial noise or wheeze, slight resonance of the voice, and mucous râle, in consequence of the displacement of the fluid contained in the adjacent bronchi.

LIFE OF JOHN HUNTER.

(*Continued from p.* 217.)

We have no correct account of the success of Mr. Hunter from his return to England in 1763, for four years afterwards, except a very brief and unsatisfactory one by Dr. Adams, who informs us that he was "unenvied, because scarcely known; anxious only for the acquisition of science: and finding his half-pay, with the little practice his connexions supplied, quite sufficient for his wants. We may add, with these slender means he not only kept himself from difficulties, but actually purchased ground in a populous neighbourhood, and built a house. In the last expense he might, indeed, have been assisted by those arrears which are always reserved by the public offices, or army agents, from the pay accumulating during active service."

It appears that during his absence, Dr. Hunter published his "Medical Commentaries," containing the three papers of Mr. Hunter already mentioned. The paper on the absorption by veins contains the following remarks: "At this time, my brother was deeply engaged in making experiments on living animals, and in

prosecuting comparative anatomy. It is well known that I speak with moderation when I say so. He took the subject of absorption into his consideration, and from all his observations was inclined to believe, that in the human body there was one, and but one system of vessels for absorption. He knew so well that many things had been asserted by one person after another, which were not true; that so many mistakes had been made from inattention, so many errors from other causes, that he could easily suppose the veins might not absorb, after all the demonstration that had been given of the fact, and therefore was determined to see how far this point could be cleared up by plain experiments and observations. With that intent he made the following experiments in my presence, and in the presence of a number of gentlemen, who, all of us, assisted him, and made our observations on what passed before us."

Though the publication of this and the two other papers must have kept Mr. Hunter's name alive among the philosophic part of the public, yet, on his return, it is easy to conceive the obscurity of his condition, as far as relates to the town at large. "The practice of surgery (says a writer above alluded to) at that time, and for a long time after, afforded no opening for him: Hawkins, Bromfield, Sharpe, and Pott embraced almost the whole of family practice; whilst Adair and Tomkins carried from him the chief of the practice derived from the army." Thus overlooked by the public, much to the honour of the Royal Society, he was at this early period (Feb. 5th, 1767), elected a Fellow, and in that title actually preceded his brother, who was ten years older, and had been known in the metropolis ten years earlier. I am aware there are not wanting those who impute this early success to the comparative obscurity of the younger brother; but I see no reason why we should look for any other cause than the real merits of the parties.

Sir Everard Home gives the following account of Mr. Hunter's zeal in the prosecution of science after his admission into the Royal Society.

"His desire for improvement in those branches of knowledge which might assist in his researches, led him at this time to propose to Dr. George Fordyce and Mr. Cumming, an eminent mechanic, that they should adjourn from the meetings of the Royal Society to some coffee-house, and discuss such subjects as were connected with science. This plan was no sooner established, than they found their numbers increased; they were joined by Sir Joseph Banks, Dr. Solander, Dr. Maskelyne, Sir George Shuckburgh, Sir Harry Englefield, Sir Charles Blagden, Dr. Noothe, Mr. Ramsden, Mr. Watt of Birmingham, and many others. At these meetings discoveries and improvements in different branches of philosophy were the objects of their consideration; and the works of the members were read over and criticised, before they were given to the public."

Dr. Adams questions the authenticity of this statement. Sir Everard Home has committed a great anachronism in saying, that "*at this time* Mr. Hunter formed that association, which, after the meetings of the Royal Society, adjourned to a coffee-house, to discuss such subjects as were connected with science." At this age, and with this short introduction to the Society, "to read over and criticise the works of the members before they were given to the public," would have been highly unbecoming in himself and his coadjutors, and, in fact, most of the names produced as coadjutors by his biographer, were not Fellows of the Royal Society till many years afterwards.

The difference between these biographers is very remarkable, and has not been settled. It was in this year that, by an exertion in dancing, Mr. Hunter broke his tendo Achillis; and, in consequence, introduced a still further improvement in the mode of treating such an accident, besides that of Dr. Alexander Monro, who, at a more advanced period of life, had met with a similar injury from the same cause.

"This accident, and the confinement in consequence of it, led him to pay attention to the subject of broken tendons, and to make a series of experiments to ascertain the mode of their union. He did not, according to the common practice, confine himself to his bed, but by compressing the muscles, and raising the heel, he was enabled, with the knee being kept straight, to walk about the third day after receiving the accident. He divided the tendo Achillis of several dogs, by introducing a couching needle through the skin at some distance from it, and with the edge cut through the tendon; in this way the orifice in the skin healed up, and made it similar to a broken tendon. The dogs were killed at different periods to show the progress of union, which was exactly similar to that of a fractured bone when there is no wound in the skin."

We have no account from Sir Everard Home of Mr. Hunter's town residence till he settled in Jermyn Street. On his first arrival in London, he was probably lodged near his brother's dissecting room, in Covent Garden. On his return to England, another writer informs us, that he resided in Golden Square. Thus the brothers, unconnected either by contiguity of residence, or by teaching in the same school, still preserved the ties of consanguinity. Accordingly we find, that "in the year 1768, Dr. Hunter having completed the house in Windmill Street, in which his collection is at present deposited, and where he afterwards carried on his anatomical lectures, he gave up to Mr. Hunter the lease of his house in Jermyn Street, which was commodious and well situated for private practice. In this house Mr. Hunter lived ten years; the same year, too, he became a Member of the Corporation of Surgeons; and in the year following, through his brother's interest, he was elected one of the surgeons of St. George's Hospital."

"In these dates," says Dr. Adams, "there appears the same irregularity in Sir Everard Home as was before remarked. Another author tells us, that he was chosen to the hospital in 1768, and that he removed to Jermyn Street in 1770, This last is confirmed by Dr. Foart Symmonds, who informs us, that in that year Dr. Hunter removed from Jermyn Street to the house he had built in Windmill Street. It is true, Sir Everard Home's means of information must have been the surest: the hospital registers, however, are open to every one; and besides the authority of Dr. Symmonds, it will appear that Sir Everard's dates are at variance with each other. In the above passage he informs us that Mr. Hunter lived ten years in Jermyn Street; yet in the progress of his history, describes him as continuing from 1768 to the expiration of the lease in 1783, a period of fifteen years. This may appear a matter of little importance, but it serves as an apology for the other instances in which I have ventured to offer an opinion different from one who had such ample means of information."

Every part of the history of such a profound physiologist is worthy of record, and it is interesting to notice every step of his progress towards the high eminence at which he so justly arrived.

Mr. Hunter had now acquired all that was necessary to give his talents and industry their full scope. He was Fellow of the Royal Society, was surgeon to a large hospital. The former enabled him to gain the earliest knowledge of every pathological transaction throughout Europe, and to acquire the only title of any real importance open to every philosophical character; the latter afforded him not only the means of introducing, but of teaching, all his practical improvements, and of confirming his pathological doctrines. He had also another advantage—a means of at once improving his income, and of turning his industry to a still better account.

Most of the hospital surgeons of those days had house pupils, who resided with them a year or two after completing their education in the country. By these means, the advantages they derived from their short stay at the London schools was greatly improved. Many young gentlemen were very desirous of living in the house of Mr. Hunter, and some, afterwards very eminent in practice in different parts of the country, received part of their education as his house pupils. Dr. Jenner of Berkley, Mr. William Guy of Chichester, and Mr. John Kingston, boarded in his house, 1770 and 1771, and lived in habits of intimacy with him until his death.

Mr .Hunter's temper was naturally kind to inquisitive young men; practical anatomy was constantly pursued at his house; and early intelligence received of whatever in surgery was going on in the different hospitals: most of all should be appreciated the continued intercourse and conversation with a man equally eager in acquiring and communicating knowledge. Nor was the advantage to the teacher merely pecuniary; many experiments, if not instituted or entirely conducted, were greatly assisted by men in the vigour of youth and health, to whom all the rich treasures of natural knowledge were presented in the fairest forms, aided by the charms of novelty.

It will easily be believed with what enthusiasm these advantages were embraced, and with what delight they were remembered.

Mr. Hunter became an author in May 1771, when his Treatise on the Natural History of the Teeth was published. This was the only one of his works which he sold to the booksellers, all his others having been published, either on his own ac-

count or in miscellaneous collections. It is right to remark that very little has been added to the information contained in this work by subsequent writers.

In July, 1771, he married Miss Home, eldest daughter of Mr. Home, surgeon to Burgoyne's regiment of Light Horse. The expense of his scientific pursuits had been so great, that it was not until several years after his engagement with this lady that his income was sufficient to admit of his entering into a matrimonial engagement.

In June, 1772, his son John was born, who afterwards became an officer in the army; he had another son and two daughters, who died very young; and Agnes, who was married to Captain James Campbell, eldest son of Sir James, and brother to the late Sir Archibald Campbell.

In the autumn of this year, Sir Everard Home became his apprentice, and furnished the following particulars concerning his brother-in-law and master:—

"While he was paying his addresses to my sister, Miss Home, I was a boy at Westminster-school. During the holidays I came home, and Mr. Hunter, who was frequently there, always showed me particular kindness; he made my father an offer to bring me up to his profession; a proposal which I readily accepted. I was struck with the novelty and extent of his researches, had the highest respect and admiration for his talents, and was ambitious to tread the paths of science under so able a master. It is a tribute which I owe to his memory to declare, that an intimate knowledge of him for one-and-twenty years has increased my admiration of his uncommon exertions, and my respect for his abilities.

"After finishing my education at Westminster-school as a king's scholar, and being elected off to Trinity College, Cambridge, I found that no advantages which could have been derived from a scholarship in the University would compensate for the time I must have given up in keeping my terms, to the disadvantage of my chirurgical education; I therefore thought it prudent to forego my claims upon the University as a king's scholar, and instead of going down to Cambridge, though elected, went immediately to Mr. Hunter.

"At this time his private practice and his professional character were advancing very fast, and his family had begun to increase, but still no small part of his time was devoted to his collection, which, as it daily became larger, was also attended with greater expense. The whole suite of the best rooms in his house were occupied by his preparations; and he dedicated his mornings, from sun-rise to eight o'clock (the hour for breakfast) entirely to his pursuits. To these he added such parts of the day as were not engaged in attending his patients.

"The knowledge he derived from his favourite studies he constantly applied to the improvement of the art of surgery, and omitted no opportunity of examining morbid bodies, from which he made a collection of facts which are invaluable, as they tend to explain the real causes of symptoms, which, during life could not be exactly ascertained, the judgment of the practitioner being too frequently misled by theoretical opinions, and delusive sensations of the patients.

"In the practice of surgery, where cases occurred in which the operations proved inadequate to their intention, he always investigated with uncommon attention the causes of that want of success, and in this way detected many fallacies, as well as made some important discoveries in the healing art.

"He detected the cause of failure, common to all the operations in use for the radical cure of the hydrocele, and was enabled to propose a mode of operating, in which that event can with certainty be avoided. He ascertained, by experiments and observations, that exposure to atmospherical air simply, can neither produce nor increase inflammation. He discovered in the blood so many phenomena connected with life, and not to be referred to any other cause, that he considered it as alive in its fluid state. This opinion seems to be advanced in the Old Testament, and, what is very extraordinary, in the Alcoran of Mohammed, it also appears to have been entertained by the celebrated Harvey; but the mode in which this subject is considered in the following work will sufficiently show that in Mr. Hunter's mind this was not an opinion adopted, but one which arose from his own investigation of the properties of the blood.

"He improved the operation for the fistula lacrymalis, by removing a circular portion of the os unguis instead of breaking it down with the point of a trochar. He also discovered that the gastric juice had a power when the stomach was dead of dissolving it, and gave to the Royal Society a paper on this subject, which is published in the Philosophical Transactions."

"In the year 1772, when scarcely known but by his relationship to his brother, an appearance in the stomach was familiar to him, which had been entirely overlooked by all former anatomists, and the explanation of which was so satisfactory to Sir John Pringle, who had devoted his life to medicine, had made several experiments on digestion, and was at that time President of the Royal Society, that he would not suffer the discovery to be completed before it was read to that learned body.

"The introductory remarks to Mr. Hunter's paper on the Digestion of the Stomach begins thus:—'The following account of the stomach being digested after death, was drawn up at the desire of the late Sir John Pringle, when he was President of the Royal Society; and the circumstance which led to this is as follows: I was opening in his presence the body of a patient of his own, where the stomach was in part dissolved, which appeared to him very unaccountable, as there had been no previous symptom which could have led him to suspect any disease in the stomach. I took that opportunity of giving him my ideas respecting it, and told him, that I had been long making experiments on digestion, and considered this as one of the facts which proved a converting power in the gastric juice. I mentioned my intention of publishing the whole of my observations on the subject at some future period; but he desired me to give this fact by itself, with my remarks, as it would prove that there is a solvent power in the stomach, and be of use in the examination of dead bodies.'

"Sir John saw the truth and importance of the theory, but not having traced it, like its discoverer, through all its bearings, he was not aware of a difficulty, which probably Mr. Hunter would have explained, had he been permitted to work on it a little longer."

We now arrive at a most important period in the life of Mr. Hunter, the commencement of his career as a public lecturer.

"In 1773, Mr. Hunter first made up his mind to become a public lecturer; his reason for which was usually explained as often as he began his course. That he was frequently hearing his opinions either incorrectly quoted, or delivered as the discoveries of others; till, at last, he found it absolutely necessary to explain them systematically. This he did at first in company with some of his medical friends at stated meetings, till his papers increased upon him almost to the amount of a course of lectures: he dwelt much, at the same time, on the advantages every man derives from putting his thoughts in writing. It resembles, said he, a tradesman taking stock; without which, he never knows either what he possesses, or in what he is deficient.

"It is not improbable, that a consciousness of the difficulty he found in making himself understood might have been among his motives; for in that paper which gained him at so early a period the highest eulogium from the first physiologist in Europe, he complains, 'This is a circumstance which, I think, may be easily understood, and yet this does not appear to be the case; for I find students very generally puzzled with it, imagining that when the testis comes down, it should be loose all round.'"

We are informed by Sir Everard Home, that he had a great dislike to public speaking, and perhaps this arose from the causes already assigned, which might be traced to the neglected state of his general education in early life.

"Giving lectures was always particularly unpleasant to him; so that the desire of submitting his opinions to the world, and learning their general estimation, were scarcely sufficient to overcome his natural dislike to speaking in public. He never gave the first lecture of his course without taking thirty drops of laudanum to take off the effects of his uneasiness. He was so diffident of himself that he trusted nothing to memory, and made me draw up a short abstract of each lecture, which he read on the following evening as a recapitulation, to connect the subject in the minds of the students."

For the two first winters he read his lectures gratuitously to the pupils of Saint George's Hospital. In 1775, they were first publicly given on the terms of other teachers. As he was under the necessity of hiring a room and lecturing by candle-light, his emoluments must have been trifling. The lectures not being considered a necessary part of the medical education, his class was usually small: and of the few that heard him, the greater part acknowledged the difficulty they found in comprehending him, which was often proved by their incapacity of keeping up their

attention. Yet he certainly felt great delight in finding himself understood, always waiting at the close of each lecture to answer any questions; and evincing evident satisfaction when those questions were pertinent, and he perceived his answers were satisfactory and intelligible.

"The answers relating to subjects immediately before explained," says Dr. Adams, "were always so ready and so perspicuous, that I frequently wished he could have assumed courage to lecture extempore, or with short notes."

It rarely happens that written lectures are favourably received by students, unless so exceedingly well read as to be scarcely distinguishable from extemporary conversation, or delivered as if from the pulpit by an eloquent and emphatic preacher. Few lecturers possess this talent, or the power of communicating information to their uninitiated and often very badly educated pupils. But notwithstanding Mr. Hunter's defects as a teacher, his matter was so new and important, that it was received with deep attention by his hearers, although they failed to comprehend a part of it.

"It is curious," says Sir Everard Home, "that the fundamental doctrines of these lectures, which constitute the principal part of the present work, should be the last of his publications; and that his anxiety to render them complete, should make him patiently revise and correct them for twenty years, before he gave them to the press. We learn from these circumstances, both his diffidence respecting himself, and the value which he placed upon his future reputation.

"It is very true, that the fundamental doctrines delivered in his lectures, are contained in his treatise, because a minute knowledge of the process of inflammation is the foundation of all surgical knowledge; but how in considerable a part of his practical remarks are to be found in this work on Inflammation!"

It is very remarkable that there is no complete and uniform edition of Mr. Hunter's works, and that his opinions are scattered through several miscellaneous publications.

"Having now a settled mode of life, fair prospects, and a daily increasing reputation, Mr. Hunter indulged to the utmost his favourite pursuits. These were physiology, more particularly as connected with pathology. He considered inflammation, whenever it occurred, to be the most common cause of organic lesion. He therefore traced the progress of it in parts, according to the difference of their structure, situation, or functions. In doing this, he soon discovered the importance of the blood; and that, to detect the share it has in health, in disease, after accident, and under violence, his business should be to observe, not how he could distort it by fire or other chemical agents; not the mechanical figure of its various constituent parts, under the uncertain inspection of the microscope, but the form it assumes in health, in its natural situation, in or out of its vessels, in and out of the body, and its changes, according to the condition of the whole animal, or of individual parts. All this was so new to the most able practitioners then living, that we can scarcely wonder if, when his opinions were retailed, with mutilations or additions, he should share the fate of Democritus, who was considered by the uninformed as a madman, but by the greatest physiologist of the age, as the wisest man in Abdera."

These new doctrines excited the admiration of the cultivators of medicine both at home and abroad, and rapidly extended his fame throughout Europe. They effected a total and rational reform in medicine, which will endure while that science is cultivated.

NEWS FROM DUBLIN.

One of the most fantastic experiments which the needy genius of medical adventure has yet essayed in the Irish metropolis, is about to be attempted in the revival of the old anatomical school of Peter-street. Since Mr. Kirby's retirement, the business of that institution was transferred to, and conducted in an adjoining building by the two gentlemen associated with Mr. Kirby in carrying on the school at the period of his relinquishing the chair of surgery in Peter-street, and his accepting that of the practice of physic in the College of Surgeons. The revolution which thus took place in the circumstances of the original institution, consigned the old building, the cradle of Mr. Kirby's fame, the scene of his triumphs, to the exclusive possession of those few *feræ naturæ* which follow man into civilized life, and find a home in the

ruins of his pride and his greatness. The silence of desolation indeed unbroken, except by the melancholy lapse of a slate or a brick-bat, by the lugubrious hootings of the owl, or the sanguinary conflicts of the feline and their prey, reigned supreme for years within walls. No living thing with the "human face divine," thought of intruding upon the solitude of the place—of taking up an abode there, or converting it to its former uses. Even the houseless Lazaroni of the "Liberty"—that living sepulchre of Ireland's trade and manufactures, shrunk from seeking shelter in a spot which popular imagination had peopled with "goblins damned," and all other manner of "unclean things." But there is nothing too bold—too daring for the enterprize of the age! Out of this Golgotha—this land of skulls *par excellence*, it is proposed to conjure up an establishment which, it is expected, will rival in glory its departed predecessor. So strange, indeed, has the undertaking appeared to some, that its origin is very generally attributed to supernatural agency, human reason in this perhaps, as in other like instances, reconciling itself by miraculous aid to facts which it cannot otherwise comprehend. We cannot of course vouch for the truth of the report; but such as it is, we feel bound, as faithful reflectors of passing events, to give it back to the world in the form in which it has reached us.

One night, as the gentleman to whom we are indebted for this marvellous project, fell into a troubled sleep after a day of great, but unprofitable exertion in search of professional occupation and its just rewards, the walls of the old school of Peter-street are said to have appeared before him in all their desolateness and threatening disintegration. Immediately he saw arising out of the centre of the ruinous pile, the *domus vacuæ et inania regna* of other days, a spectre in human form, but of superhuman size, holding forth in its extended hands a pair of Hessian boots of vast dimensions, (very dusty, and somewhat the worse for the wear), and a Queen Anne musket covered over with clots of blood and cobwebs. A thrill of horror ran electrically through his system on beholding this strange apparition; but fortunately a deep sigh, and a symathetic tear escaping from his half-closed lids, relieved his excited feelings, and composed him to reflect on the fate of the spectacle, which stood in apparent reality before him. At first he imagined that the whole scene was but a mere phantasy produced by the peculiar state of his mind on retiring to rest; one, in short, of those cunning and mysterious devices by which nature warns us through the instrumentality of the imagination against a too active exertion of our faculties, and a too ardent pursuit after the objects of ambition. From indulging, however, in this rational interpretation of the event, than which, indeed, nothing could be better calculated to shadow forth the fleeting quality of all sublunary greatness, he was soon driven by the changing aspect of the scene. Fancy once more assumed her fairy wand, and converted those gloomy materials of admonition into scenes and forms more congenial and agreeable to the enterprizing spirit of the slumbering aspirant after fame and professional eminence. To his great amazement and delight, the old pile began to smile out in renovated splendour; crowds of students thronged its deserted walls, while the spectral form which had so terrified him, bowed graciously, and pointing to the venerable relics in his hands, motioned the ravished spectator to a new race of glory in the professional world. By degrees the "boots,"—the brazen sandals of the *genius loci* of 1812, we presume, shone out in radiant lustre, as if just submitted to the master-hand of "Warren" himself. The musket too, the identical one, no doubt, with which the youths of Peter-street were prepared for the coming events of Mont St. Jean and Waterloo, brightened into its pristine effulgence, and presented itself at "full-cock" to the sleeper's grasp, when lo! as he made a convulsive effort to jump into Mr. Kirby's "boots," and possess himself of the "immortal firelock," the spring gave way, and a loud report awoke the dazzled enthusiast, and told him it was but a dream!

An occurrence which would be naturally classed by most other persons with those freaks of an excited imagination, which "come as shadows, so depart," made a deep impression, it is said, on his mind; and has been acted on by him already with much energy and promptitude. Not only has considerable progress been made in the architectural resuscitation of the ruin, but the great difficulty of identifying the new with the old establishment, has been overcome by the aid of a "portic licence" and some "plaster of Paris," which tell us, in *alto relievo*, that the place was "established in 1810,"

the later history of the institution being thus happily got rid of by the figure "*ellipsis.*" The several chairs are filled for the present with *locum tenentes* until better can be procured, or the "seminary" is in a fit state to bond its own supply. One feature of its internal arrangements, as being perfectly "original," as far as we know of in such places in Dublin, should not be omitted. Every one is aware that dissection has been hitherto practised during the day alone. The shortest sun indeed was deemed quite long enough for the laborious and unhealthy occupations of anatomy. The most diligent student shrunk from such pursuits by night, and felt himself agreeably warned from the putrid toils of the table by the lengthening shadow of the scalpel. All intercourse with the dead was consequently omitted, except by professional resurrection-men, or a few gentlemen amateurs, "lads who love the moon," and display an early *penchant* for nocturnal adventure. The proprietor, however, proposes to reverse the usages of anatomical study, and to bid defiance to the salutary indications upon which these usages were founded. The conversion of scientific pursuits into occasions of disease and demoralization, is, we understand, to be effected in the following manner. A copious supply of gas illumination is already bespoke for the concern; lamps of a peculiar construction (more wonderful, no doubt, than Aladdin's) suspended over each table, are to light up the mangled lineaments of "poor humanity," for the inspection of which *lenses* of a novel kind are to be provided, that minute parts may be seen more *naturally* by being magnified! The funereal orations of a demonstrator are of course to give the final touch of perfection to the sepulchral pageant, and exhibit the last effort of the misapplication of economy of time and labour, by reducing young men to the inevitable loss of health and morals. We must, however, leave it to the imagination to follow out the details of a picture of a dissecting-room lighted up with gas at night, for which the horrors of Monk Lewis's best scenes, or of "Kirk-Alloway in a blaze," furnishes nothing comparable. We know not exactly whether the Anatomy Bill contains any provision against disturbance of the dead by night; but would thank Sir James Murray, the legal guardian of the grave in Ireland, to favour us with his opinion upon this important subject.

PUBLIC MEDICAL REPORT IN IRELAND.

(*Continued from page 224.*)

"With the view then of remedying the defects to which we have alluded, as either inherent in the present system of public relief, or as actually existing in the different classes of public charities in Ireland, we beg leave to suggest,—

"1st. That to whatever class the institutions may belong through which public relief is to be afforded to the sick and impotent poor, the source from which the means of relief are to be derived should be fixed and secure, and also that these means should be such as may claim the respect and attention of the better orders of the community, such as may command an administrative machinery most likely to insure to the greatest number of destitute sick the largest amount of real *bona fide* relief which local circumstances will admit.

"2nd. That the *minimum* of professional qualification which may be required by the law to be possessed by the different classes of medical officers to be hereafter appointed to these institutions, should be the same for all, respectively, whatever be the class of institution for which these officers may be candidates.

"3d. As regards County and City Hospitals.

"That the only officers permitted, under any pretext, to reside in the buildings appropriated to this class of charities, should be one governor or registrar, one unmarried house surgeon or apothecary, and one matron, to each hospital.

"4th. Every thing be permitted by the managing committee to be grown, and every domestic animal permitted to be fed upon the premises, should be turned to the profit of the funds of the charity; a regular debtor and creditor account being kept of the expense of production, and the value of the produce.

"5th. Registers should be kept, under proper heads, of the kinds, quantities and prices of the various provisions received, expended, and in store.

"6th. Instead of the varying, and in some instances anomalous and expensive plans of diet now in use, a fixed and uniform dietary, should be adopted, framed with a view to the strictest economy, consistent with the health and comfort of the patients, and with a due consideration of the habits and useful diet of the persons likely to become inmates of this class of charities.

"7th. Monthly diet tables, of the form

of those now in use in army hospitals, should also be kept, specifying the name, age and disease of each patient, dates of admission and discharge, number of folios in register, days of the month (31 columns), number of days in hospital, number of diets, full, half, and low or fever diet.

"8th. A printed copy of the dietary, with a daily ward diet-roll, should be hung up in each ward, in order that each patient may see the exact quantity and kind of food to which he or she is entitled by the order of the physician or surgeon for the day.

"9th. The number of medical officers attached to county or city hospitals, should be regulated by the amount of the local population; but these officers should never, if possible, be fewer than two physicians with one assistant physician, two surgeons with one assistant surgeon, and one resident apothecary for each hospital, all possessing the minimum of professional qualifications already alluded to. The character for dexterity in operation, experience and skill, which the being attached to an hospital seldom fails to confer, would thus cease to be a monopoly as at present; local competition in zeal and science would be established, whilst those who are able to pay for the best advice would have an opportunity of making a choice.

"10th. The amount of remuneration to be paid by each charity of this class to its medical officers, excepting the resident apothecary, should also be regulated by the number of the local inhabitants. Thus in towns and cities containing from 5,000 to 20,000 souls, the remuneration for medical services need not exceed 100*l.* divided amongst the two physicians and two surgeons.

"The distinction confered by the appointment would ensure candidates, whilst the smallness of the salary to each officer would prevent even suspicion of any other motives, on the part of the aspirant, than those of the most laudable ambition. In places containing from 20,000 to 30,000 inhabitants, the remuneration might be still smaller, say 80*l.* for all, whilst in places containing 40,000 and upwards, no pecuniary reward whatever need be given by the charity, more especially if it can be made available, as it ought to be, for the purposes of medical education.

"11th. A uniform system of returns and book-keeping should be enforced, such as would tend to promote strict care and economy, and therefore to render the means of the charity available to the greatest number of the sick and destitute poor.

"12th. The Government shall possess the power of a *veto* at least in the appointment of the medical officers of all public hospitals.

"13th. Hospitals of this class, instead of being limited, as they are at present, to the treatment of surgical and chronic medical cases, should be made to follow the enlightened examples set by the London, Dublin, and Belfast Hospitals, into which fevers of all kinds are admitted. They would thus become much more extensively useful to the community. Infection in typhus may be said to cease after cleanliness, ventilation and space have been established around those sick of that disease.

"14th. Extern patients should be prescribed for, and operated on, if necessary, on certain days, by the medical officers in rotation. A very large population, as that of Belfast, might be advantageously divided into districts, each having an extern medical attendant, who, for a small salary, as in Dundee, in Scotland, would visit, or see at his own house, the sick poor of his own district; his prescriptions being taken by the patient to be made up at the Hospital Pharmacy."

Were the improvements suggested by the framers of the report before us adopted by the government, a vast deal of good would be done to the sick and famishing poor of Ireland. There is much reason to hope that the present enlightened statesmen at the head of the British government will do much to ameliorate the wretched condition of the Irish poor.

The next part of the report is devoted to suggestions for the improvement of Dispensaries, Lunatic Asylums, and Houses of Industry, and with this we shall conclude our present notice of this brochure.

"1st. The charities of this class, and those also of Fever Hospitals to be rendered sources of efficient relief to the sick destitute poor, should, in our opinion, be assimilated in principle, as nearly as possible, to those just described.

"2nd. In every case, they should be made to combine the advantages of small general hospitals with those of the best dispensaries, and might, we think, be advantageously attached to district work houses, or houses of Industry, for the relief of the impotent poor, should such establishments be contemplated.

"3rd. Their funds should be placed upon a secure and respectable footing, without however precluding private con-

tribution from the public-spirited, the humane and the wealthy.

"4th. By rendering the funds of dispensaries or dispensary district hospitals independant of private subscription, the general practitioner and the industrious fair-trading apothecary would be protected from the influence of an abuse which is every day weighing more hardly upon their business, and at the same time depriving the destitute poor of a large share of the means intended exclusively for their relief. We mean the practice of subscribers, in several cases, insisting upon advice and medicine *gratis*, from the charity, for their own families, as well as for those whom they may recommend, although such persons might be well able to pay the independant practitioner for his services and his drugs.

"The corporation, therefore, and the medical men of the charity, the local magistrates and clergymen, should alone have the power to recommend either intern or extern patients, always however certifying, that the fitness of the case had been carefully ascertained.

"5th. The distance at which these institutions should be placed from each other; the salaries, classes and number of their medical officers; the extent of their means; in short, the power of the whole machinery of each of these institutions, should be regulated by the amount of population in cities and towns; by the amount of population and extent of surface jointly in rural districts.

"6th. One of these general dispensary hospitals should be placed in the midst of every 40,000 or 50,000 town or city inhabitants. One should also be placed as near the centre as possible of every twelve miles square, or of every area of six miles radius, of inhabited rural districts, not included within the bounds of the districts assigned to towns or cities, or to county or other hospitals.

"7th. The machinery of one of these dispensary hospitals, for a town district of from 5,000 to 20,000 inhabitants, having no other hospital, should comprehend two senior medical officers at least; two juniors or assistants; and one resident manager or governor. The salaries of each to be the same as those assigned to the medical officers of the lowest class of county or city hospitals.

"8th. The smallest of these general hospitals should contain at least 15 or 20 beds, which allowing to each patient an average of one month's continuance in hospital, would afford accommodation for 240 sick poor annually.

"9th. In very remote rural districts, where but little private professional emolument is to be expected, such advantages should be held out as would induce respectable, well educated medical men to become candidates. Salaries varying from 75*l.* to 150*l.* per annum and a residence, but not within the hospital, would probably be sufficient,, as the district might be more or less wealthy.

"10th. Carefully organized control, and competent professional inspection at *uncertain* times, embracing a system of graduated responsibility and check, based upon legislative enactment, should *at once* be established, whatever may be the details of the relief proposed. With these safeguards the legitimate objects of public charity would be protected, whilst the stock of public virtue would be increased: without them public charity is, unfortunately, never well administered; the fraction of it allowed to reach the poor becoming less and less every day.

"11th. Should it hereafter be determined to relieve the industrious poor from the burthen of supporting some of the most impotent of their relatives, as has already been done in regard to lunatics, the district hosptials would afford a nucleus upon which to engraft a more extended system of public charity, in which clergymen of all persuasions, the natural guardians of the poor, might be advantageously employed, and paid for devoting a certain portion of their time and intelligence to its administration.

"12th. By the distance of these district hospitals from each other, neither the medical attendant nor the extern sick would have to travel farther than six miles to give or receive advice. All motive for exaggeration in returns, or for drugging the poor unnecessarily, would be removed; genuine, unmixed good would be done; demoralising abuses would be checked or reformed; whilst room would be left for spontaneous benevolence to exercise its charity, by establishing *purely private* dispensaries, or for the Government to establish purely public institutions of that class, should such be thought necessary, under any peculiar local circumstances.

"The very name of fever hospitals, given to the charities of this class, operates strongly against their efficiency. They should therefore be assimilated in every respect to the dispensary hospitals. Indeed, good sense and imperious necessity have produced this effect, in a greater or less degree, in several of them already. With a very slight modification of manage-

ment, those actually existing would become just the kind of public medical charities which we have been recommending. Let them be made general instead of exclusive hospitals, let them be called *district* instead of fever hospitals, and then the severe accident need not be left to perish in the remote and wretched cabin, where distance renders the county hospital of no avail, and where the name and rules of the *fever hospital* close by preclude the admission of the wounded or dying man, however urgent his case may be, and however ample the accommodation vacant at the time: whilst a similiarly exclusive law prevents the poor man who is perishing from fever and destitution, from being received into the county hospital next door, although it were half empty at the time, or occupied by persons least entitled to its advantages.

"Lunatic Asylum.—From what we have already said upon the subject of Lunatic Asylums, we think ourselves justified in submitting, that the same strict economy of management and expenditure, and the same regularly organized system of control and check, recommended in the case of county hospitals, should be enforced in the charities of this class. The large sums now levied on the counties would thus be diminished, whilst a much nearer approach would be made to that most desirable point, viz:—the exact amount of the public means which well directed public charity ought to devote to that particular description of poor who, in their various grades of impotence, constitute the inmates of these asylums.

"Houses of Industry.—Wherever we have met with these institutions, they appeared to be a real blessing to the community. Some of them, we thought, might be improved in principle; some we considered had found the exact limit of relief, beyond which allowances to the poor ought not to pass, and indeed cannot pass, without acting as an encouragement to idleness and improvidence; some were just touching upon that dangerous boundary. Upon the whole, however, they deserve the very warmest encouragement of the Legislature.

"The Gaols which we had an opportunity of visiting in Ireland, taken as places of temporary accommodation for certain of the lower orders, afford, with a few exceptions, an admirable illustration of what all the other institutions for the public relief of the poor ought to be in that country.

"The Dietary is uniform for all gaols; economical also; and (as ample experience has proved, and we have witnessed,) fully sufficient to mantain a state of the best health in the vigour of life. There are three kinds of Diet, either of which may be adopted by the local superintending magistrates, viz:—

"Bread Diet:—Bread, 2 lbs.; new milk, 1 quart.

"Potato Diet:—Potatoes, 9 lbs.; new milk, 1 pint; buttermilk, 1 ditto.

"Mixed Diet:—Oaten meal, for stir about, 8 oz.; potatoes, 4 lbs.; new milk, 1 pint; butter milk, 1 pint; for one prisoner for one day.

"The cost of the mixed diet per head per day, used in Cavan gaol, at the spring assizes of 1834, was $2\frac{1}{2}d.$ at the summer assizes, $2\frac{1}{4}d.$

"Flesh meat is never given except in the gaol hospital, and then only in cases where the surgeon certifies that it is absolutely necessary.

"The prison dress is warm and serviceable, and, though coarse, superior to which the labouring poor are able to provide for themselves.

"The lodging is scrupulously clean, dry and well ventilated; the temperature is equable and healthful; the whole as comfortable as the security of the prison will admit.

"Discipline is all mild in the extreme, and never more than is consistent with health.

"Habits of Temperance.—Must be regular, no possible opportunity being afforded to the prisoners for dissipation or excess.

"In every instance we found the health of the inmates of the gaols excellent, and had the most positive assurances that the flesh and whole appearance of the prisoners are often improved after their committal, more especially after committal for slight offences; nor is this to be wondered at, when we know that the constant food of a large portion of the labouring poor and of their families, more particularly in the South West of Ireland, is a scanty allowance of the *worst* kind of potato, the "Lumper," with a little salt; their clothing, rags, both by day and night; their lodging, a hut, seldom water tight; their bed, a little loose straw, on the bare earth; whilst with all these privations they are exposed to sudden changes of temperature, to wet and damp, and the baneful effects of intoxication by whiskey.

"It is a proof either that prisons have ceased to be places of adequate punish-

ment in Ireland, or that the labouring poor must be miserably destitute, or perhaps of both, when the pittance and the cell of the gaol, with all their bitter restraint, are sought after as a source of relief, as we have reason to believe they are, in some cases. The remedy would be, to make things worse for the felon, and better for the honest, the impotent, and the destitute labourer.

"In regulating the dietary and clothing of any class of institutions for the relief of the poor, two objects should be kept constantly in view:—

"1st. To preserve or improve the health of the inmates.

"2nd. To relieve the greatest number that the means of the institution will permit, and therefore to avoid or reduce all unnecessary expense.

"The following examples show what may be done to attain these objects, by strict economy and vigilant prevention of abuse.

"In the gaols of Cavan, Monaghan, Dundalk, and in many other gaols in Ireland, the prisoners in the full vigour of life, working on the tread-mill and in the stone-yard, are not only kept in health, but are improved in flesh and in appearance, as already stated, on the mixed diet, at a daily expense for each prisoner of from $2\frac{1}{4}d.$ to $3d.$; say $2\frac{1}{2}d.$, or $1s.$ $5\frac{1}{4}d.$ per week, or $3l.$ $16s.$ $0\frac{1}{2}d.$ per annum.

"In the Borough Compter in London, where, of 4000 persons committed in three years, only two deaths occurred, for $2\frac{3}{4}d.$ per day, or $1s.$ $7\frac{1}{4}d.$ per week, for each prisoner.

"In Manchester, Salford Prison, where in 1831 the committals were 4042, the deaths 6, for $2\frac{1}{2}d.$ per head per day, or $1s.$ $5\frac{1}{2}d.$ per week.

"In the workhouse of Southwell, in Nottinghamshire, the inmates are fed "on the best provisions" for $2s.$ per week, or $3\frac{1}{2}d.$ per day, and clothed for $3d.$ per week.

"In the House of Industry and Mendicity in Ennis, in the county Clare, the inmates are fed and kept in as good health as their age and infirmities will allow, on a mixed diet, at the cost per day of $1\frac{7}{8}d.$, or $1s.$ $1d.$ per week per head.

"In the workhouse of the parish of St. Cuthbert's, Edinburgh, the cost of diet per head per day, for all the inmates (460 in number), including the sick and lunatics, is $1\frac{3}{4}d.$, or $1s.$ $0\frac{1}{4}d.$ per week.

Clothes and washing for each, including stays to the old women, and pocket-handkerchiefs to all, per annum .	0	18	11
Food, per annum per head .	2	13	1
Total .	£ 3	12	0

"In the Workhouse and Mendicity Institution, in the city of Londonderry, the whole expense of each *inmate* for the year 1833, for board, washing, and lodging, was $2l.$ $7s.$ $6d.$, or less than $11d.$ per week, or $1\frac{1}{2}d.$ per day per head.

"The diet of this institution is as follows:

"*Breakfast.*—Oaten meal in stir-about, 7 ounces, with buttermilk, 1 pint.

"*Dinner.*—Potatoes, $2\frac{1}{2}$ pounds; milk, churned, 1 pint.

"Supper, for those only who work, such as sweepers—meal in stir-about, 6 ounces; buttermilk, half-a-pint.

"There were 78 inmates when we saw this institution, in August 1834, all regular and orderly. The house remarkably clean, the food good and well served.

"Adult boarders, recommended by respectable persons, were taken in, fed, lodged, and washed for, at the rate of $1s.$ $3d.$ per week; children at the rate of $8\frac{1}{2}d.$ per week.

"With the above examples before us, we cannot see why the inmates of pauper lunatic asylums in Ireland, most of whom are incurable, and for ever lost to society, should cost the public for their food alone, $4\frac{1}{2}d.$ or $4\frac{3}{4}d.$ per head, per diem, or $2s.$ $7\frac{1}{2}d.$ per week, or $6l.$ $16s.$ $10\frac{1}{2}d.$ per annum, besides eating up the produce of large farms and gardens, purchased and cultivated at the public expense. Yet we have seen these lunatics dining upon lumper potatoes and buttermilk, not of the best description, crowded round a table at which they had not room to sit. Nor can we conceive why the machinery with which these unconscious beings are surrounded should be so expensive, whilst the honest, useful, industrious labourer is left to perish of disease, aggravated or brought on by hopeless destitution, in his wretched cabin, in the midst of his starving family.

"The same remarks will apply with equal or greater force to the charges made against the public for the inmates of some of the county hospitals.

"Some striking benefits result to the poor themselves from a strictly economical administration of the means devoted to their relief. In the first place, a much greater number is relieved than otherwise would have been: and in the

next place, both the legislature and the public cease to despair of being able to relieve the many, when they see it proved by the example of a few, that extensive good may be done by means apparently small in proportion, but honestly applied.

"D. BARRY,

"*Feb.* 17, 1835. "J. R. CORRIE."

Here we pause for the present, and shall conclude our analysis of this important report in our next.

REPORT OF THE POOR LAW COMMITTEE.

(*Continued from p.* 221).

We resume the Report of the Provincial Medical Association on the New Poor Law, as the most correct account of the operation of this oppressive law both on the poor and the profession. The Report is the production of a number of medical practitioners, and is consequently more impartial than the views of certain individuals.

"Your Committee now proceed to examine how far the various plans for pauper medical relief hitherto in use, accord with the principles just laid down. It is well known to the senior members of this Association, that the old mode of pauper medical care, scarcely to be called a system, failed lamentably in its objects. There appears to have been *four* main evils connected with the former provisions for the sick poor. First; the occasional adoption of 'tenders,' not merely for the purpose of determining the amount of medical contracts, but principally as guides to the parish authorities in selecting their medical officers. Second; the monopoly of numerous parishes by one practitioner, to the exclusion of others equally qualified for the office, and to the unavoidable neglect of the pauper patients. Third; the employment of ignorant and unqualified medical officers. Fourth; the extension of medical parochial relief to improper objects, and a consequent increase of the public burdens.

"In a report of a Committee formed at Warwick, in 1827, for conducting an inquiry into the state of the sick poor, these evils are strongly and faithfully depicted. This Committee condemns 'the system of letting the sick poor of parishes for an annual stipend, to the lowest bidder among such medical practitioners as offer to take the charge of them.' Their report goes on to state, 'These contracts are entered into without a constant regard to the probability of the practitioner being enabled to perform the duty undertaken by him; sometimes without due consideration of the character and acquirements of the person proposing himself; and generally without a just attention to the necessities of the parish, or the fair remuneration of the medical or surgical attendant.' It states again, that, 'The contracts are, almost in all cases, made to the disadvantage of the medical attendant, so that the practitioner generally looks for compensation to holding many parishes at once, some of which are, of course, distant from his residence; and his views are seconded by the erroneous policy of the overseers, who often give a preference to the most distant resident, or the most ignorant practitioner, because such persons offer to take the parishes on the lowest terms. In these transactions there is often such a total disregard of fairness, and so entire and evident a sacrifice of the well-doing of the sick poor, that the parishes, containing five or six hundred paupers, have been taken for five or six pounds; twenty or thirty parishes have been farmed by one practitioner; and even a large parish actually farmed for one guinea per annum. It is almost unnecessary for the Committee to point out that such contracts, by which their medical correspondents represent themselves as at once wronged and degraded, entail the most serious evils on the poor population of the country, and, consequently, on the public;—that poor patients are often neglected in serious disorders;—that many become incurable and helpless from neglect, and necessarily, thenceforth, burthensome to their parishes;—that the poor people generally are rendered discontented by a knowledge of these circumstances, and, therefore, to their own great detriment, frequently delay to apply for medical aid until all aid is in vain; and being apparently protected, by formal and delusive provisions, against the evils of sickness, and therefore, perhaps, excluded from the attentions of benevolent persons to whom they are known, it sometimes happens that lives are lost that might have been saved.'

"The preceding quotations describe in the amplest terms, the evils existing under the late system: your Committee would only add one or two remarks. The medical treatment provided by contract was occasionally limited to the 'paupers,' that is, to those who were receiving relief *in money* from the poor rates. The overseers were, in these cases, in the habit of

giving a small sum of money to the applicants for *medical relief*, to constitute them paupers, and so *entitle* them to attendance from the parish doctor.

"In the generality of instances, however, the contract had no such limitation, either expressed or implied; and the whole of the labouring population of a parish were at liberty to avail themselves of the sum paid by the authorities to the surgeon for procuring medical assistance when ill; or if the form of an order were necessary, the overseer frequently gave it without inquiry, or made it answer the purpose of relief in money, aware, that as a contract existed, he was not putting the parish to any immediate expense by throwing the burthen on the medical attendant.

"It would be difficult to conceive more fertile causes of pauperism than the operation of such plans; and those who have attentively watched them, have, doubtless, been surprised to find that, in the laborious investigation entered into before framing the poor law, scarcely any allusion was made, by his Majesty's Commissioners, to the subject.

"The customary mode of appointing the medical attendant in the parish vestry, was likewise open to much objection. The same medical attendant was often re-appointed as *a matter of course*, year after year, whether competent or incompetent. In case any alteration was thought necessary, tenders were generally required and the election decided accordingly. In other cases, it not unfrequently happened that two or three of the most noisy, or most influential rate payers, succeeded in procuring the election of some protegé, while better qualified practitioners, who would have received the majority of suffrages if taken in a proper manner, were excluded. In some large parishes a better arrangement existed; the resident medical men undertaking the office in rotation by the year.

"Your Committee have thus dwelt on the evils of the former system, not merely because they have been so frequently lost sight of in recent observations and remarks on the subject, but because they have evidently been the source of the more numerous and flagrant abuses which now prevail.

"Your Committee, in common with all who have considered the subject, had looked with hope at the prospect of a thorough reform of the system, on the introduction of an amended Poor Law. It, however, appears, that hardly had the new law come into action, when a prejudice was conceived by its administrators against themedical profession, and although they were necessarily and totally unacquainted with the various bearings of this important subject, not less than with the best mode of effecting an alteration, yet, in general, they distrusted and sternly resisted the suggestions of those who alone were able to assist them, viz., the medical practitioners. Nothing is more clearly borne out by the evidence your Committee have collected, than this circumstance; though it is gratifying to them to state, that in *some unions*, and in the sphere of operation of *some assistant Commissioners*, a more conciliatory spirit has been evinced; and had it not been for the tendency of general regulations, there is little doubt that in these places satisfactory arrangements would have been made.

"Your Committee have, either directly or indirectly, received accounts from forty-eight individuals, respecting the arrangements in forty-seven unions. The results of these communications may be classed under three heads.

"First; with regard to remunerations, the practice of requiring 'Tenders' has evidently become more general than formerly. It appears to your Committee unnecessary to dwell upon the evils of this absurd and pernicious custom; they have already been sufficiently exposed: the feelings and opinions of every member of our profession must surely be unanimous on this particular. But the point of view in which, at the present time it is desirable that the 'Tender' system should be placed, is the *degradation* that it inflicts on professional men. In many unions, however, instead of 'Tenders' being required, and also in those where 'Tenders' have not been found to reduce the medical stipend so low as was thought proper, the Guardians have fixed a sum for medical services, subject to the approbation of the Commissioners. This, although apparently different from 'Tenders,' amounts, in reality, nearly to the same thing; for the parties who fix the remuneration, are not guided in their determination by a careful estimate of the intrinsic value, or of the ordinary price of medical attendance; but merely by the circumstance that persons *can be found* who will undertake the duties on such terms; the offers of the Guardians are, therefore, equivalent to the 'Tenders' of an adventurer, and have the same effect.

"In thus fixing the remuneration, the other party in the transaction, viz., the practitioner, has, with very rare exceptions, not been allowed a voice; consciousness of power, on the part of the Guardians, has prevented their paying any attention to his representations. The usual answer to the most convincing reasons has been, 'Take the office, if you please, *at our terms*, if not, we can readily procure some other person.'

"But, occasionally, Boards of Guardians have evinced a desire to meet the fair demands of the professional body, and in these cases, it has almost invariably happened, that the Assistant Commissioners, or the Central Board, have refused to ratify the appointments. The Commissioners have generally, but not always, been successful in carrying their point. Instances of such collisions between the authorities have occurred in the *Thame*, the *Eastry*, the *Penshurst*, and several other unions.

Nothing is more striking than the difference in the rate of medical remuneration, in different unions and counties. The majority of the Assistant Commissioners do not appear to have been guided by any fixed calculation, but rather by accidental circumstances, in determining the amount of remuneration for the medical officers. In some parts of Hampshire, and in a few other localities, the population of the parish or district has been the criterion employed for this purpose. In other unions, an average payment for each patient, or, as it has been termed—a payment per case, has been adopted. The amount of these payments has either been decided by 'Tender,' or it has been dictated by the Commissioners and Guardians; with a proviso, that all cases exceeding a specified maximum should be attended *gratuitously!!* Without giving any opinion as to the propriety of this mode of remuneration, under different and improved regulations, your Committee have no hesitation in stating, that in the manner in which it has lately been enforced, it is highly objectionable.

The result of a year's experience has shewn, that where, as in large parishes containing a resident medical officer, it has, in a few instances, afforded a remuration equal to the former rate of contract; yet, for the most part, it has proved grossly insufficient, and very oppressive to the medical officer. In smaller parishes especially, and in those distant from medical advice, it has fallen remarkably below the usual rate of payment. Thus, the error of the authorities in insisting on an uniform rate for parishes, under all circumstances of popu'ation, and of proximity to the medical officers, has been clearly proved.*

But within the last few months a new mode of parochial remuneration has been adopted. Your Committee allude to the formation of a species of 'Medical Clubs,' which is intended to provide medical relief for two classes of the poor—the independent labourer and the pauper. The Assistant Commissioners in Essex, Gloucestershire, &c., have proposed 'Clubs' of this kind. The following is an edict of the Epping Board of Guardians, confirmed by the Assistant Commissioner, and may be considered a fair specimen of the plan:—'The remuneration to the medical officers shall be by annual subscriptions of the Guardians, and of such of the independent labouring poor as may be desirous of availing themselves of the proposed arrangement within the pre-

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* The facts relating to Hedsor and Little Missenden parishes are strongly corroborative of the preceding remark. In Hedsor, the average number of patients being at the rate of seventeen per annum, its distance from the medical officer being from three to four miles, and the contract, exclusive of midwifery, having for many years been ten pounds. The first years stipend, under the new system, may be thus computed:—

Attendance on sixteen cases of illness, at 2s. 9d. per case.....			£2	4	0
Attendance on the case of a poor woman, by daily visits (two and half miles) for three weeks; she was in destitute circumstances; her husband had walked for an order once to Woburn, once to Wycomb, twice to Hedsor, and twice to Beaconsfield; he was at last said to have been abusive, and was refused.					
			2	4	0
The necessary correspondence with the clerk of the union, and conveying returns by post and otherwise.....	5	0			
Toll at turnpike gate.....	10	0			
			0	15	0
			1	9	0

Being the total remuneration paid to the medical attendant, for the same amount of labour as, under the former contract, he would have received the sufficiently small sum of ten pounds.

scribed period, according to the following rates:—

For an individual maintaining himself or herself.....	2	6
For a wife whose husband is a member of some benefit society.....	2	0
For a man and his wife	4	0
For each child in a family (if one be subscribed for, all must)...	0	6
For every person in the same family	2	0
Cases of midwifery	10	0

The Guardians are to have the privilege of adding to the pauper schedule any name they may think proper, during the contract, paying only at the same rate as for those originally included.'

"In any remarks which your Committee may make on this plan, they will probably escape all suspicion of opposition to a well-regulated system of mutual insurance among the labouring classes, for defraying the expenses of illness. Such a system will be found, on slight inspection, to be totally different from the recently established 'Medical Clubs.' One of the principal evils of the latter, is the associating paupers in the same club (and subject to the same regulations) with the independent labourers, who ought to be perfectly exempt from the control of Boards of Guardians, and from any contact with pauperism.

"A striking injustice inflicted on the medical officer by a club of this kind, is the privilege which the Guardians retain, of adding, at their pleasure, any sick paupers to the 'schedule,' on the same terms as are paid by the other contractors (*well and sick together*). 'For instance, in the parish of Chigwell, the pauper population is estimated at four hundred, *i. e.* those who when ill would receive parochial relief. Out of this number only *one hundred* are contracted for, as receiving weekly allowance from the parish; so that on any of the others requiring medical aid, they are immediately placed on the 'schedule,' thus rendering the parish surgeon liable to attend *all*, without *all* being *contracted for*.'

"One general feature, however, pervades these several modes of remuneration, viz. *their utter inadequacy;* and the consequent probability that the duties required will be neglected, or will be performed in an unsatisfactory manner.

"The Guardians, be it remembered, are unable to detect error in practice, and they themselves ought therefore to conclude, that if they offer a temptation to the medical officer to withhold from the sick poor the requisite attendance and medicines, by forcing him to accept an *inadequate remuneration*, they are as guilty as himself of the dreadful results which may ensue to the sufferers.

"Secondly—with regard to the medical appointments and duties.

"The diminution in the number of medical attendants on the poor, is one of the principal features in the present system. It may be said, that as there are fewer paupers to be attended, it is reasonable that fewer medical men should be employed. This argument might apply with some force, if the paupers were more closely congregated, but the case is very different. The paupers inhabit the same extent of country as before, and, therefore, in rural districts, the labour of the attendant is scarcely at all diminished, on account of the diminution in the number of his patients, while, for other reasons hereafter to be mentioned, his trouble is much increased.

"Your Committee are in possession of numerous facts bearing on this point.

"In the Cookham and Bray unions, *two* medical men were appointed under the new system, in place of *seven* who previously attended.—In the Newbury union, consisting of *eighteen* parishes, *one* individual undertook the duties formerly performed by *twelve;* he had no assistant, and had a space to ride over measuring sixteen miles by ten.—In the Bampton district of the Witney union, *ten* miles in diameter, *eight* medical men were formerly employed, now only *one*.—In one of the districts of the Aylesbury union, the surgeon resides at a distance of *seven* miles from one part of the district, where medical assistance might be obtained within *two* miles.—In another district of the same union, the nearest point to the surgeon's residence is *seven* miles, and the most remote *twelve*. Under the old system *sixteen* medical men were employed for the parishes of this union, containing forty parishes and four districts; under the new system *three* medical men only, one of whom was likewise appointed to an extensive district in another union.—In the Wheatenhurst union, comprehending *fourteen* parishes, and necessarily much travelling, the Commissioners induced the Guardians to waive a contract with the established practitioners, and to engage *one* young man from the schools, who had neither a horse nor instruments.—In the Faversham union, including twenty-five parishes, only *one* medical man was employed.—

Numerous cases of a similar kind could be adduced.

"Another peculiarity in the present arrangement, which, though not universal, has been practised on an extensive scale, is the division of the unions into medical districts, or, to state it more correctly, making the districts, devised for general purposes, applicable also to medical duties. This is particularly exemplified in the Thame union. The distribution of the parishes in the districts of this union is so unsuited for medical purposes, that the nominal district surgeons were unable, by themselves, to perform the duties required. The amount of labour of the medical attendant is very much increased by this arrangement.

"Parishes which, under the old plan, were accustomed to seek the nearest advice, as well for the sake of economy, as for the convenience of the attendant, and for the safety of the sick, are now compelled to accept the surgeon of the district, however distant, or otherwise unacceptable, he may be. The boundary of a union has been thought a reason for the exclusion of a medical resident, who though not within the union line, has been situated near a population which had, in consequence of the alteration, a vastly increased distance to travel, thus:—In the Ivor district of the Eton union, formerly *four* established medical men were located near the boundary, at three different convenient stations: under the present arrangement, *one* only has the charge, and he residing at an extreme corner of the district. It is difficult to suppose an hostility to the objects of medical science, or a scheme for defeating the natural desires of the sick for relief, but no arrangement could promise success better, had such been the motives of the authorities in this instance.

"In many similar cases the resident practitioners have protested earnestly against the district system, showing to the Guardians the inevitable consequences with regard to the sick. Scarcely, however, in one instance, have their representations been of any avail.

"A singular practice has crept in, to obviate the difficulties which have thus arisen. The nominal medical officer of the district has been permitted to engage other practitioners, residing in different parts of his district, making his own terms with them. This, be it observed, has been entirely *optional* with the medical officer: the Guardians merely stating that they should consider him *responsible* for the whole.

"The absurdity of such a practice, and the temerity of the surgeon who undertakes such responsibility, may indeed be excused, on the ground that, at present, it is the only means that the profession possesses, of modifying the evils of the system.

"It is obvious that if the authorities believe that one practitioner can undertake a district, they ought to insist on his performing the duties, either in person, or by means of his private assistant, who would, of course, be *under his own control.* If, on the contrary, they believe that he cannot do so, they are equally bound to appoint such a number of medical men, as may be necessary for the task; nor should they devolve the duty of engaging these additional practitioners upon their medical officer.

"The proper performance of medical duties has, moreover, received another check by the new regulations. The power of deciding as to the necessity of medical aid in any case of illness, has been vested in the relieving or parish officer. Hence a fair opportunity for the early and successful treatment of disease, has often been lost to the medical man, and his judgment fettered by his necessary dependance on the discretion of these inferior officers.

"Your Committee have, in the principles laid down in the beginning of this report, shown how contrary such a practice must be to sound reason and humanity. The numerous instances of distress, of danger, and of loss of life, which have come to their knowledge, might be related with effect, if the object were only to excite the feelings of this association; but the tendency of these regulations must be apparent to every reasonable mind, without entering into such painful details.

"In those unions, where a payment per case has been adopted, the relieving officer had a stronger inducement to refuse an 'order,' than where a contract at a fixed sum existed, because, by so doing, he saved the parish money: several instances have occurred where a disorder, in its incipient stage, has been denied medical aid, because the relieving officer thought the illness not sufficiently serious for attendance. Protracted disease, or death, has occasionally been the consequence.

"The distant residence of the relieving officer, his constant occupation, and the

parish officers' frequent unwillingness to act, added to the increased remoteness of medical advice, have all occasioned dangerous delay in the treatment of disease.

"Another proof that a proper supply of medical attendance is not afforded by the authorities, is, that no remuneration is allowed for consultation in urgent and dangerous cases. A surgeon in Essex, who was lately called in by the district surgeon to a case of hernia requiring operation, was informed that his charge of two guineas would not be allowed, and that the Commissioners 'could not justify so expensive a practice as that of having recourse to a consultation in every case of difficulty that might occur!'

"Thirdly—The evidence collected by your Committee proves that the medical body in general, and especially those members of it who are engaged in parish practice, are liable to offensive and degrading treatment from the new authorities: this is particularly observable in the formation of unions.

"Medical officers are liable, in the discharge of their duty, to receive a summons from the board of Guardians, on occasions of any supposed neglect; they are thus subject to be reprimanded by persons who cannot be supposed capable of judging correctly as to the due performance of medical duties. Your Committee have received information of several oppressive proceedings of Guardians in this respect.

"Again, if a medical opinion is considered necessary to guide the Board in any of its deliberations, which not unfrequently occurs, the medical officer is *summoned* to attend in the same manner as are the inferior officers of the Board.

"Further, any medical assistance afforded to the paupers by a practitioner, who is not officially connected with the Board, even though it be done *gratuitously*, has been frequently deemed a sufficient reason for refusing relief to such person until the union medical officer had been applied to; and the certificates and suggestions of all other practitioners have been abruptly rejected.

"Lastly—Those medical men who have presumed to express an opinion unfavourable to the new medical arrangements, have frequently been marked for oppression by the anthorities, and some have even been induced to withdraw or withhold their names from petitions to parliament against the system, from apprehension of injurious consequences to themselves."

In our next we shall insert the conclusions of the Committee on the statements and arguments in defence of the new system by the Poor Law Commissioners, which are totally indefensible and tyrannical.

The Human Brain, its configuration, structure, development, and physiology; illustrated by references to the nervous system in the lower orders of animals. By Samuel Solly, Lecturer on Anatomy and Physiology in St. Thomas's Hospital, &c., &c. Royal 12mo. pp. 492, with twelve plates. London: Longman and Co. 1836.

It is gratifying to observe the rapid progress of our medical literature, and that so many valuable works are almost daily issuing from the press. We offer this remark from the fact, that the work whose title we have given above, is the third on the subject which has appeared within the last month. The author has taken a more comprehensive view of his subject than his cotemporaries, and followed the example of John Hunter in collecting a vast deal of his materials from comparative anatomy, a science which at length occupies universal attention from the successful labours of "the English Cuvier," Dr. E. Grant. We have much pleasure in submitting to our readers that portion of the subject which illustrates the human brain and nervous system, which is ably arranged by Mr. Solly, who prefixes the following introduction to his work:—

"The anatomy and physiology of the human brain are subjects not generally pursued with the interest and attention which their importance deserves, by the majority of medical students, that is, of those who are engaged in acquiring a knowledge of the human organism, and are endeavouring to trace the relations existing between its structures and functional manifestions with a view to the successful treatment of its diseases.

"According to the plan generally pursued in treating the anatomy of the brain in systematic works of the present day, all the information conveyed amounts to little more than a vain catalogue of names applied to parts, without reference to their structure, their functions, or even their analogies in the nervous system of the lower orders of animals. Such a barren prospect as a list of names, holds out but little to attract the most zealous among students, while the dryness of uncon-

nected detail, and the obstacles to clear conceptions engendered by the absence of every thing like arrangement, almost certainly deter him from attempting to learn more than is required to prepare him for examination for the diploma. It is unfortunate indeed that candidates for this honourable certificate are still very generally required to describe the appearances presented by the brain dissected, or rather destroyed, by the old method of slicing; a method most unphilosophical in its conception, and totally inadequate to impart any real information in regard to the structure of the organ. And I do not hesitate to affirm that this circumstance has contributed essentially to retard the diffusion of sound knowledge in regard to the anatomy and physiology of the most important system in the body.

"Vieussens, as early as 1684, demonstrated the fibrous structure of the medullary portion of the brain. And Reil in 1807-8, published his researches on the structure of the cerebellum, which were in the course of various succeeding years followed by some very elaborate and interesting inquiries into the structure of the cerebrum. Since this time Gall and Spurzheim have followed in the same path, while Vicq. d'Azyr, the Wenzels, Soemmerring, Tiedemann, Serres, and a host of others have added immensely by their labours to our stock of information on the true structure of the enkephalon.

"Cuvier, in the report which he made to the Académie Royale des Sciences de Paris upon M. Serres' work, *De l'Anatomie Camparée du Cerveau*, remarked very forcibly on the inconvenience of dissecting the brain from above downwards in the manner generally pursued, and he showed that in consequence of comparative anatomists adopting this mode of dissection, their researches into the constitution of the nervous system of the lower orders were productive of very imperfect results, in as much as the chain of resemblance between the lower and the higher orders of animals was soon lost sight of; whilst M. Serres, by commencing with the dissection of the spinal cord, and tracing it upwards, was enabled to throw great light on this interesting branch of physiology, and to prove that there is a regular gradation in these parts, that the chain is perfect, and that such differences as do occur simply consist in the abstraction of parts, and the loss of those powers which have been proved to be dependent on them.

"Familiar with these expressions of condemnation of the old method of dissecting the brain, and from such high authority, I have endeavoured, without presuming to arrogate to myself the credit of discovering any new system, to lay down a plan for the study of the anatomy of the cerebro-spinal axis, founded upon the rational basis of investigating its structure in man by the light of comparative anatomy.

"General principles have never been discovered by the observations of isolated facts; a tissue of such facts was therefore of little or no practical value to the student in medicine; and in studying the brain by the old method he was merely loading his memory with a number of names unconnected with all besides included in his studies, and without the most remote bearing upon the object of these studies, the practice of medicine and surgery.

"There can be no question but that the only philosophical method of simplifying and giving a character of general interest to the anatomy of the human brain, is by commencing with the structure and functions of a nervous system in the lowest and simplest forms of animal existence, and from this rising by degrees to the highest, carefully observing each addition of parts, and the relationship borne by these to an addition of function. By pursuing this course we shall be rewarded by finding that the enkephalon, this apparently most complicated organ in the human being, is but a gradual development from an extremely simple fundamental type on one uniform and harmonious plan, and that the seeming complexity of the cerebro-spinal axis in man really arises from the great concentration, as opposed to the extreme diffusion of its component parts in the lower order of animals; for in no particular are the higher orders more strikingly distinguished from the lower than in the concentration of function within circumscribed spaces. In following out the plan I have adopted in the following work, I shall strive to avoid, on the one hand, falling into the error of attempting too minute a detail of all the various discoveries which have been made, and giving an account of all the various opinions which have been broached, and on the other, of basing my descriptions, or confining my views to the circle of my own individual researches and speculations. My constant object will be to clear the path of all unnecessary incum-

brances; and carefully arranging whatever is known upon the anatomy and physiology of the human brain, to keep in view the principle which Herschel has so concisely stated, that 'Science is the knowledge of many, orderly and methodically arranged and digested, so as to be attainable by one.'"

We now arrive at the first section of the work, which is extremely interesting and instructive. Our readers will be amply repaid for the time expended in its perusal. Mr. Solly heads his article, "The Human Brain: Comparative Anatomy."

"The naturalist who devotes his time to observing the habits and instincts of animals, their external form and general appearance, pursues a branch of science which has unfolded a multitude of facts highly interesting and amusing to him who delights in the works of nature. But the physiologist follows in his pursuit of knowledge a more arduous and elevated path; for, not satisfied with observing the manners, actions, and outward appearance of animals, he carries forward his researches to their internal organism, with the view of ascertaining the relation which structure bears to function.

"Researches of this kind afford us the most important and valuable proofs which we possess of the office of a nervous system in the execution of those acts which are exhibited to us by living beings; for by such investigations the physiologist, discovering that the development of their internal organs corresponds with an increased capacity of enjoyment, the existence of which is demonstrated by their habits and instincts, obtains the only evidence which a science of observation like physiology is capable of affording, that they stand in the relation of cause and effect.

"On this principle, I consider that the study of the anatomy and physiology of the human brain could not be introduced to the student in a more philosophical manner, or with a prospect of greater advantage to himself, than by taking an extended but general view of the nervous system of the lower orders of animals. I shall not enter with much detail into the immense variety of forms which the study of the nervous system of the whole animal kingdom presents to us, because I merely wish to use comparative anatomy as an ally in my attempt to simplify the study of the human brain, without regarding it, as it really might be, as an object of extreme interest, independent of the service which it thus is capable of rendering to the student in medicine.

"The celebrated Haller, who thoroughly felt the value of comparative anatomy in the study of human physiology, and the importance of taking this course when reasoning on the functions of a nervous system, after observing that a brain and medulla spinalis are met with in animals with a head and with eyes, says, "Neque credo aut oculos absque cerebro, aut absque oculis cerebrum in ullo animale reperiri. Sunt ergo sua cerebra vermibus, mytulis," &c.

"All physiologists of the present day agree in considering the nervous system as the medium by which animals are connected with the external world. But when, in our dissection of some of the inferior orders of animals in whom there is an evident susceptibility to receive impressions from external nature, and to react upon those impressions, we are unable to demonstrate the existence of a nervous system, we feel rather at a loss to reconcile this apparent discrepancy, and come to the conclusion that the sentient matter which we call neurine, is dispersed in such minute quantities throughout their tissues as to escape observation.

"Dr. Macartney adverts to this opinion, when after proving the very minute quantity of real nervous matter which exists even in the human brain, he remarks, 'We can hardly take upon ourselves to say that the simplest animals, and even plants, may not have some modification of sentient matter incorporated in their structure, instead of being collected as in the higher orders of animals into palpable membranous cords or filaments.'

"The polypiferous tribes of animals afford us the best specimens of living beings exhibiting a certain extent of consciousness, but without any distinct nervous system: the polype, which simply consists of a digestive cavity, is supplied with exquisitely sensible tentacula, which feel with precision, seize upon all the food within their reach, and convey it into the stomach. But that such instances are viewed as exceptions to the rule of the manifestations of consciousness being in direct relation to the degree of development of a nervous system, is proved by the fact, that physiologists have considered the intimate connexion existing between the nervous system and the grade or condition which the animal occupies in the scale of created beings as the best principle of classification. Pro-

ceeding on this plan, the animal kingdom is divided into four subdivisions, which are termed the

Cyclo neurose of *Grant*,	or Radiated of *Cuvier*.
Diplo-neurose	Articulated
Cyclo-ganglıated	Molluscous
Spini-cerebrata	Vertebrated

To which may be added a group of still lower organization, answering to the *Acrita* of MacLeay, in which the neurine, if existing at all, being incorporated with the other tissues, cannot be demonstrated as forming a separate system.

"It will generally be found that the Cyclo-neurose is the most simple; the Diplo-neurose the next, and so on. But this is not uniformly the case; for the nervous system, to which, as being the most simple, it will be desirable first to direct our attention, is taken from the division of the Diplo-neurose: but it is not improbable that the simplicity in this instance arises solely from its being imperfectly developed or in a rudimentary state, and may perhaps therefore be considered as affording an imperfect type of of a nervous system.

"As my present object in alluding to the nervous organization of the lower orders is not, as I have said, to carry my readers minutely into the subject, but solely to make the study of the human brain more simple and interesting, I shall confine myself to the description of the most prominent features in each division.

"Before we commence the study of the anatomical arrangement of the individual parts composing the nervous system of the lower orders, and trace their relations to the cerebro-spinal system of man, we ought to investigate the physical characters of the material of which they consist. In so doing, we shall be struck with the simple plan upon which these organs, as every other in the construction of a living being, are formed; for instance, the bones are composed of a membranous network, in the meshes of which earthy matter is deposited to give them that firmness which is required for their office in the animal economy; muscles consist of a membranous network, in the interstices of which matter is placed endowed with the power of contraction on the application of its appropriate stimulus; and the nervous system, consisting of a membranous network, in the interstices of which is deposited a peculiar substance denominated neurine, forms no exception to this beautiful simplicity. There are two kinds of neurine, differing both in consistence and colour, one being of a pearly white and fibrous texture, the other ash-coloured or grey, soft and pulpy: this difference of colour is most evident in man and the higher orders; the difference of texture depends in all probability more upon the arrangement of the supporting membrane than upon any peculiar difference between their elementary particles of neurine.

"This variety of colour is not confined to the human brain, or even others of the higher orders; for Cuvier states that the ganglia in the *Helix stagnalis* and *H. cornea* are bright red; in the Aplysia blackish red and granular; and the ganglia of the fresh water muscle are well known to be of a bright yellow, while the connecting nerves are uniformly white.

"Professor Ehrenberg has shown that neurine actually consists of very minute fibres; and he informs us that these fibres can only be discovered by the aid of a magnifying power of 300 diameters, and that he was sometimes obliged to have recourse to a much greater magnifying power, as 800 diameters, in order to bring them into view. He examined thin slices of the recent brain, and states that the fibrous structure was in general most obvious at the margins of the slices. These fibres in the cineritious portion are interspersed with globules and plates; the greater number of these fibres instead of having a regular cylindrical form are knotted like a string of beads, the swelled portions being situated at some distance from one another, and united by narrower parts which are continuous with them, and are formed apparently of the same material.

"Besides these fibres, which Ehrenberg calls *articulated*, he observed towards the base of the brain and crura cerebri, other somewhat larger fibres, of a regular cylindrical form, interspersed upon the knotted ones. The cylindrical fibres are about 1-120th of a line in diameter.

"The cortical substance seems, according to Ehrenberg's observations, to differ from the medullary or white chiefly in the want of the straight cylindrical fibres, and the articulated fibres being contained in a denser net work of blood vessels, and being covered by a layer of free granules larger than the dilated parts of the knotted fibres.

"The cylindrical fibres are tubular, containing a granular medullary matter; the articulated ones do not appear to be so.

"The optic, olfactory and auditory

nerves are composed of the articulated fibres, while those of motion are clearly cylindrical, but seem to be continuous with the articulated fibres of the brain and cord: the structure of the nerves of ordinary sensation is not so clearly ascertained."

The next portion of the work is devoted to the chemical analysis of the substance of the brain, a part of animal chemistry as yet in its infancy. This is still worthy of notice.

"*Comparative Analysis of White and Grey Cerebral Matter.*

"M. John is the only chemist who, in his analysis of the brain, has hitherto separately examined the grey and white matter. He has stated that the white matter contains more fat than the grey, and that its albumen is more firm. The following comparative analysis was made of the brain of one of the insane patients who died at Salpêtrière.

Entire brain (density = 1048.)

Water	77·0
Albumen	9·6
White fatty matter	7·2
Red fatty matter	3·1
Osmazome, lactic acid, and salts	2·0
Earthy phosphates	1·1

	White substance.	Grey substance.
Water	73·0	85·0
Albumen	9·9	7·5
White fatty matter	13·9	1·0
Red fatty matter	0·9	3·7
Osmazome, &c.	1·0	1·4
Earthy phosphates	1·3	1·2

"The most simple form in which we find the nervous matter arranged when so completely separated from the rest of the body as to constitute a distinct nervous system, is in the Ascaris, a species of intestinal worm: we can scarcely conceive an animal having its relations to the external world more limited that this: it has not even to seek its food beyond the narrow spot to which its existence is confined, and can therefore have little necessity for a nervous system, and we find it accordingly but imperfectly developed.

"Jules Cloquet has given us the best account of the nervous system in these animals: it is from a work published by him on this subject in 1824, that the following account and drawing are derived.

"Two white cords, rather thicker in the middle of the body than at the extremities, composed of a series of small lines united at angles, or, as it were, broken and slightly swollen at each angle, sending to the right and left filaments so thin that they escape the eye, except when seen through a magnifying lens, constitute their nervous system. These cords are situated within the plane of muscular fibres, and descend, the one on the abdominal, the other on the dorsal surface of the alimentary canal: see plate I. fig. 2. The abdominal nerve forms a circle around the vulva of the female, as will be seen by reference to the diagram; the slight enlargements Cloquet regards as ganglionic.

"Laennec, Otto, Lamarck, and Cuvier, all agree with Cloquet in considering the lines above described as the nervous system. Nevertheless it appears to me extremely probable that these cords do not represent a perfect type of a nervous system, even in its most simple form, but that in this individual it has been arrested in its development at a period corresponding to one of the regular stages through which the nervous system passes in the higher orders, in whom we know that the nerves are developed first, and the centres or ganglia afterwards; and in this animal, where the ganglia scarcely exist, is it not possible that the organization is incomplete; that the animal, in fact, is not perfect; that the conducting portion of the nervous apparatus has been formed, but not the point from which the power emanates requiring to be conducted.

"The above simple arrangement perfectly corresponds with the first appearance of the cerebro-spinal axis during the development of the vertebrated class of animals, and affords a beautiful illustration of the law, that the higher classes of animals during their devolpment go through some of those forms which are permanently retained by the lower orders; and although this interesting subject will be dwelt on at length in the section on the development of the human brain, I must not entirely pass it over in this place.

"As the ovum of the bird affords the greatest facility in the study of its progressive development, the appearances, as observed in this class of animated beings, will be described; observing at the same time, that we have every reason to believe similar phenomena take place in the development of the whole series of vertebrated animals."

The analogy or indendity of ovology of the gallinaceous egg and all vertebrated animals was clearly established by the illustrious Harvey, though generally over-

looked by modern physiologists, as we lately noticed in this Journal. There is no novelty in the following observations.

"The following description of these changes are derived from a very useful and instructive paper published by Dr. Allen Thomson.

"'If the egg of the common fowl be examined seven or eight hours after incubation, a dark line may, with the aid of a magnifying lens, be discovered on the upper part of the cicatricula, or germ spot, towards the centre of that portion of the disk, or germ spot, which from its greater transparency is called the transparent area.

"'This line or primitive trace, is swollen at one extremity, and is placed in the direction of the transverse axis of the egg; its rounded extremity is situated towards the left when the small end of the egg is turned from us, and indicates the place where the head of the fœtus is afterwards formed.

"'This large extremity occupies very nearly the centre of the transparent area, while the linear part of the primitive trace, corresponding to the body and tail of the fœtus, approaches the margin of that area on the right side.

"'As incubation proceeds, the whole cicatricula expanding, increases in size. The transparent area becomes larger, more pellucid, and defined. We are indebted to Pander for the important discovery, that towards the 12th or 14th hour the germinal membrane becomes divided into layers of granules—the serous and mucous layers of the cicatricula; and that the rudimentary trace of the embryo, which has at this time become evident, is placed in the substance of the uppermost or serous layer: the part of this layer which surrounds this primitive trace soon becomes thicker, and, on examining this part with care, towards the 18th hour we observe that a long furrow has been formed in it, in the bottom of which the primitive trace is situated. About the 20th hour this furrow is converted into a canal, open at the two ends, by the junction of its margins. The canal soon becomes closed at the cephalic or swollen extremity of the primitive trace, at which part it is of a pyriform shape, being wider here than at any other part. (Plate I. fig. 2, 24th hour.) Some time after the canal begins to close, a semifluid matter is deposited in it, which, on its acquiring greater consistence, becomes the rudiment of the spinal cord, which at this period consists, therefore, of merely a double white line of semifluid neurine,' perfectly similar in appearance to the nervous cord in the Ascaris."

Mr. Solly next illustrates this part of physiology from comparative anatomy. He adduces some very curious and conclusive facts on this subject.

"Let us next direct our attention to the nervous system of one of the asterias; it is beautifully simple, and not the less instructive, for in these specimens of the *radiata* we meet with one of the earliest instances of unequivocal voluntary locomotive power; and when in accordance with these manifestations of consciousness and the power of commanding the execution of certain offices in different portions of its frame, we detect nervous cords emanating from nervous nodules, we are induced to regard them as the instruments employed in the production of these phenomena.

"Tiedemann was the first to prove decidedly the existence of a nervous system in the star-fish. His account was published in 1816, accompanied with a beautiful drawing of it, representing a ring surrounding the œsophagus, giving off a filament to each ray, besides ten smaller ones, which he believes to descend to the stomach: at the same time he observes, that he could not discover anything like ganglia; but in an excellent preparation of the twelve-rayed star-fish in the museum of King's College, twelve little nodules of neurine or ganglia, one opposite each ray, may be distinctly seen, from which fig. 3, Plate I. is taken."

The next remarks are on the development of the nervous system.

"This nervous system, simple as it is, forms an accurate type of the most complicated in the highest species of animated beings, containing, if I mistake not, exactly the same number of elements; and the distinct portions to which we must now attach different names, should peculiarly engage the student's attention when thus presented to his observation under this the most simple form: if this be not done, when called upon to trace the same arrangement in the human being, he will be in danger, from the greater number of similar parts closely connected together appearing to do away with this fundamental simplicity of being lost in the labyrinth of perplexing obscurity, which seldom fails to disgust those who attempt to learn the structure of the brain in the ordinary method.

"The three portions may be designated ganglia, commissures, and nerves.

"The small swellings or nodules of neurine, are the *ganglia*.

"The cords which pass between the different ganglia, and thus connect them together, are the *commissures*, or apparatuses of union.

"The cords, which are connected to the ganglia by one extremity and the textures of the different organs by the other, are the *nerves*.

"The term ganglion is not the best that might be devised for the designation of this portion of the nervous system, as merely signifying a knot: it only characterizes its external appearance, without in the slightest degree noticing its function as distinguished from the nerves and commissures.

"But as it seldom answers to attempt a decided change in the nomenclature of a science like anatomy, which has existed for so many years, it will perhaps be better to employ the same term in the comprehensive meaning which comparative anatomy justifies us in adopting.

"Human anatomists have been too much in the habit of considering a peculiar rounded form essential to the constitution of a true ganglion, not usually, therefore, applying the term ganglion to a collection of cineritious matter, unless moulded into a knotted form and supported by a dense membrane: thus the medical student has been led to imagine that the neurine which is contained within the human skull is altogether different from the ganglia of the lower orders, merely because it differs from them so much in its outward appearance.

"But the fact really is, that if the term ganglion be correct as applied to the nodules of neurine or centres of power in the lowest animals, it is equally correct to apply it to those of the highest; and it therefore follows that the human brain is but a series of large ganglia, though their close connexion and the great size of the commissures give to it a degree of complication which we can only unravel by seizing the thread at this simple though perfect type of a nervous system, and never dropping it till it has conducted us through all the various additions made to its fundamental simplicity up to the perfect but complex organization in the human being.

"That a peculiar form is not indispensable to the constitution of a ganglion, even according to the confined sense in which that term is used in the descriptive anatomy of the human body, is proved by the fact, that a simple layer of cineritious neurine of a semilunar form lying between the dura mater and skull in the temporo-sphenoidal fossa, through which the posterior root of the fifth pair of nerves passes, is described as being perfectly analogous to the rounded firm knots which are attached to the posterior roots of all the spinal nerves: and the analogy is perfect; but it ought to teach us this lesson, that a particular form is not essential to the constitution of a ganglion. I think, therefore, that we are justified in extending the term ganglion; and I am quite sure that it would enable us very considerably to simplify the anatomy of the human brain, if we were to apply it thus to any collection of cineritious neurine into a circumscribed mass, whatever form or arrangement it may assume; for instance, the cineritious neurine which forms the convoluted surface of the hemispheres of the human brain I should denominate the hemispherical ganglia; for the convoluted appearance arises solely from the circumstance that it was necessary a contrivance should be adopted to pack a very extensive surface into a small space, on the same principle, (and I trust that the homeliness of my simile will be excused for its simplicity,) that when we put a handkerchief into our pocket we fold it up instead of attempting to carry it about us spread out to its whole extent. Now there would be just as much reason to deprive the semilunar ganglion of its generic title, and give it a name merely in accordance with its appearance, as there is in separating the hemispheres of the human brain from their analogous ganglia in the lower orders, and designating them by a term which gives a mystery to their character they do not deserve."

We have thus given a comprehensive account of Mr. Solly's views, and must now pause for want of space until our next Number. This work evinces considerable research, discrimination, and talent. It is a valuable addition to medical literature.

All communications, books for review, and advertisements, to be forwarded (postage free) to E. COX, Medical Bookseller and Publisher, St. Thomas's Street, Southwark; or to the EDITOR, 4, Great Queen Street, St. James's Park, Westminster Abbey.

THE

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE X.

Special Consideration of Hernia continued.

My first observations refer to fluid collections in the chord. The chord abounds with cellular membrane, as you are aware. In this situation an insulated cyst is sometimes found containing fluid, and this part is also sometimes the seat of a diffused serous deposition. Now both of these I have seen, and I have treated both; but the former much more commonly than the latter; and in every instance these diseases were considered to be of a hernial nature.

A parent posted to town, bringing a son of eleven years of age, for my advice, on account of a presumed rupture. A small, round, elastic, moveable tumour, the size of a walnut, lay outside the external ring, that is, between it and the testicle, but nearer to the former. Previous to his setting out, a tight bandage had been applied to secure him against all danger of the journey. This precaution had induced a slight tenderness of the part; in every other respect the boy was in perfect health. As long as these tumours are situated external to the ring, and do not exceed the quoted magnitude, they cannot be confounded with hernia, except where the grossest ignorance prevails. The ease with which the fingers can insulate the swelling, the freedom of its motion in any direction in which it may be pressed, while it quickly glides back to its normal position, and the disengagement of the chord above it, are diagnostics which will not deceive. Besides, change of posture has no effect upon its place, and it is undisturbed by respiratory efforts. However, if the cyst involve the chord in the inguinal canal, a situation where it is very rarely found, the nature of the case will not be so plainly perceived. Yet it can be determined by the history of the growth, by the fixed position it maintained from the commencement, and still maintains, as well as by the absence of all intestinal irritation, and of every digestive derangement. When this tumour of the chord has been mistakenly treated as a hernia, its removal has been expected by the use of a truss. I have profited by this observation, and I have often availed myself of the advantages of pressure, aided by the other ordinary applications.

I have stated, that the whole cellular substance of the chord is sometimes the seat of serous deposition. There are two forms of this affection: the one of very rapid, the other of much slower formation. As the former most generally succeeds a violence adequate to the production, I am not surprised when it perplexes those who are not prepared to meet it. Only a few weeks have passed since I was called by Mr. Ambrose, of St. Andrew-street, to visit a patient of his, in Grafton-street. Mr. V——, seventeen years of age, while indulging in field exercises took a leap from a considerable height. He instantly felt an exceedingly acute pain in the groin. He became faint, sick, and he vomited a large quantity of bilious matter. Recovering a little, he was conveyed to his house, where he had the attendance of his apothecary for two days. During this period he was in a state of great depression; his stomach was unceasingly sick, every thing was rejected, and he vomited profusely. Strangulated hernia was apprehended, and it

was on this account my assistance was desired. The spermatic chord was largely tumefied from the testicle even to within the abdomen. The swelling was elastic and very painful. It seemed tied by the external ring, and hence had a very imposing resemblance to the disease it was presumed to be. The suspicion was further confirmed by the presence of febrile excitement, hiccup, constipation, coldness of the extremities, disinclination to move the trunk, and general tenderness of the abdomen. In such a case as this, we must pause to consider. An arrogant flippancy which some assume is always reprehensible in cases which are at the same time obscure and urgent, however excuseable it may be, in the common demands of practice. But in matter of doubt, where suffering may be involved, and even life endangered, I do think the most sagacious and discerning need not be ashamed to hesitate while he carefully examines the reasons for the opinion he is anxious to express. In truth, the present is exactly one of those critical occasions in which he who desires to be circumspect, must take his own time to make up that solid judgment, which can inspire all his future action with proper decision, justifiable promptness, and a reasonable prospect of final success.

At my first interview, I acknowledge I could not, as it is common to say, make up my mind. Conveying the difficulties I felt to Mr. Ambrose, I suggested the propriety of continuing his topical antiphlogistic measures. I withdrew to return in a few hours. In the meantime I formed the opinion that the disease was an inflammation of the chord, originating from violence. And now I am to communicate to you the reasoning I employed to arrive at such a conclusion. The idea that a hernia already existing had been forced into sudden development was contradicted both by the testimony of an intelligent apothecary and by the patient himself. The close connexion of the swelling with the testicle forbade the notion of its being a rupture of sudden formation, as I had never seen one take place to the same extent. Although the greater part of the tumour lay before the chord, still I could trace it to its posterior part, where it included the epididymis, a condition I never observed in any scrotal rupture. The parts were also less yielding or pliable than they are in that disease. Besides, they were more firm, more weighty; and although they were elastic, the elasticity seemed to depend on a resistance and solidity different from anything I had ever felt in any hernial tumour. Again, the swelling extended above the confines of the internal ring. I could follow it with my hand for some distance; and when its depth concealed it, the direction was still pointed out by the pain attendant upon pressure. In hernia there is no tumour superior to the ring, and I am not aware that any particular extent of pain exists above it. There was no defined hardness to be found in any point, and all parts of the scrotum were equally sensible to the touch, circumstances dissimilar to those I have seen in the disease which this in so many particulars appeared to resemble. The general symptoms were such as are known to accompany strangulated hernia, and were, therefore, well calculated to produce an impression in favour of its existence. But there was not the same danger that a surgeon would be misled by these as by the local appearance, because he must have seen them to prevail in other diseases; for instance, in certain forms of hernia humoralis, of nephritis, of descending calculus, and of colic; so that, in the present case, they might fairly be referred to an extensive injury of the spermatic chord, and to violence sustained by the testicle, which may be presumed to have suffered, although that part for several days evinced no obvious sign of being implicated in the accident which had taken place. A rapid decline of the inflammation, and a proportional decrease of general disturbance, by the treatment which was adopted, soon showed the propriety of the opinion I was induced to entertain from the reflections I have now set before you. My opportunities have not furnished me with many similar examples, and I selected this one from the few my practice has afforded, both on account of its being recently before my mind, as well as of the obscurity by which its true nature was for some time concealed. A minor form of this disease is sometimes the consequence of too powerful a pressure exercised by a truss. There is fulness of the part, with tenderness, and the impression we first have from examination is, that the hernia has again escaped. Laying aside the instrument, repose, and proper topical applications quickly soothe all local uneasiness, abate the swelling, and dispel suspicion.

I never met with a case of the less acute kind of general serous deposition in the cellular tissue of the chord, and

therefore I shall say nothing upon that subject beyond this, that we are credibly informed that this structure is liable to such a disease. I have seen the outward investments enormously tumid where general anasarca prevailed, and I have seen fluid diffused in the more immediate cellular tissue of that part in some affections of the testicle. But both appear to our senses with so much plainness, that I question whether a mistake can at any time be made. In the one, the general anasarcous tendency, and its concomitant symptoms, the absence of respiratory impulse, the kind of mutation in form, position, and degree, of which the tumour is the subject, the pitting and other effects of pressure, with attention to the history of the case, conspire to remove every source of error. In the others, the state of the testicle, and the detail which on such occasions we are almost sure to hear from the lips of the patient, together with the absence of coughing impulse, will clear away any doubts which may arise from a partial reducibility of the swelling.

The veins of the spermatic chord are sometimes distended to such a degree that the tumour appears to the eye like a scrotal hernia. This varicose affection is accompanied with uneasiness nearly amounting to pain. There is not uncommonly lumbar distress, and this occasionally is succeeded by sickness of the stomach. The swelling is observed to retire when the body is recumbent, to return when the erect posture is resumed, notwithstanding the continuance of pressure at the ring, and an impulse is communicated to the hand whenever the patient coughs or sneezes. These are propitious circumstances; yet, a proper manual examination will greatly contribute to set the judgment right. The tumour feels knotted, and seems to be composed of several distinct, tortuous, and elastic cylindrical bodies which admit of an easy gliding motion upon one another. Besides, we can in any posture of the body diminish the mass by pressing it into the abdomen, while we find it regains its previous magnitude, notwithstanding the continued application of the hand to the external ring; even in the centre of the tumour we can with our fingers obliterate the pliable vessels of which it is composed, and if we refer to the ring we shall find that opening unaltered in its diameter. In these cases history is never distinct, and of course cannot be satisfactory; in consequence we are to rely on the characters enumerated; and these I feel authorised to say will be found sufficiently diagnostic. I have read of the application of trusses to such diseases, but I am not aware that so disgraceful an error has ever been committed amongst us.

Scrotal hernia and hydrocele of the tunica vaginalis testis are usually compared as diseases which are likely to be confounded with one another. I have seen these diseases complicated in the same subject, and doubts have been felt under such circumstances. But really I have never seen an instance of that grave mistake, against which the provisions of diagnosis are so ostentatiously arranged; so that I might be disposed to treat the matter in a cursory manner, did I not fear I should be accused of an omission. To guard myself against such a charge, I must descend to particulars; but I am sure you will allow me to make my selection, and to choose such as are, in my opinion, most conducive, at least such as are sufficiently so for the purposes of my own practice. Well, I never have fell into an error on the subject, nor, indeed, do I know any one who did. The means by which others were prevented I cannot tell; but I think I can show you how I have been defended from such a culpable blunder.

However, before I go further in this business, it can be no reproach to you should I turn aside for a moment, and by a short digression give you some distinct notion of what is meant by the hydrocele, with which our concern lies, and reject definitions; for these preparations have more eloquence than any tongue, no matter how educated in all the excellence of logical precision. Here a series of illustrations pass before you in review. This is a normal testis, with its envelope. This is a natural testis, with a slightly distended envelope; in this one there is a further morbid increase of the investing cyst. And here, to pass by all that is intermediate, you look into the original tunica vaginalis, enlarged to thirty times its original capaciousness: in each the testicle preserves nearly its natural size. Well, these cavities once contained a fluid, and the greater its quantity, the higher each ascended on the chord. In the examples placed in your hands, this progression must attract your notice, until you come to the fourth, in which the hydrocele has ascended to the external ring and even passed within its limits. It is material to remark the position of the testicle. In all the specimens which

are here, that organ lies at the back of the tumour, and is placed about that line, which unites its middle and its inferior third; in none is it situated below, and it does not in any project above the level of the posterior surface. From the way in which it here appears, it is buried in the fluid which surrounds it as far as the attachments of the serous membrane of this cavity will permit it to do—and I might say it exceeds that permission, was I to aim at an unnecessary minuteness of pathological description. Now, I think this outline will so far answer your purposes and mine, that I may proceed to whatever I have further to say with respect to diagnosis. You are in possession of the usual character of hernia; I need, therefore, only give you those of hydrocele, and, for the greater part, leave the arrangement of contrast to your own intelligence.

From the last preparations, you must see that an incipient hydrocele always appears at the inferior part of the scrotum, and of course that the chord must be free at the external ring, a part that in itself is sufficiently diagnostic. You must also see that before a hydrocele can appear at the ring so as in anywise to assume the appearance of a hernia, its progress must be in a direction diametrically opposite to that observed in the growth of a scrotal rupture, a circumstance of striking difference between the two diseases. A further means of distinction is afforded by the position of the testicle. Examine these two examples, of nearly equal bulk; in each the testis holds a different situation. In the hernia it is below, and tangible; in the hydrocele it is behind, and it cannot be distinctly felt, although its position may be determined by the peculiar sensations excited by heavy pressure. A hydrocele of this magnitude is a much more equal tumour than a hernia usually is; besides, it communicates the idea of uniform elasticity, and, I presume, no one can doubt that such elasticity depends on a watery accumulation. If there is any question upon the matter, let the scrotal tumour be raised on one hand, and then let it be slightly percussed with the finger of the other, but with varying forces. An uniform tremulousness of its investments will then be perceptible through the hydrocele, and such as is never found to pervade to the same extent all parts of a hernial tumour. Much diagnostic reliance is placed on the transparency of the swelling; this criterion is of value, and therefore you should know how to avail yourselves of a test on which, in doubtful cases, so much reliance is reposed.

The tumour is to be so disposed that the light and the observer's eye shall be at its opposite sides. The disengaged hand is next to be laid edgeways on the highest part of the tumour; the necessary preparations for examination are complete, and you can now judge by the presence or absence of transparency. While the hydrocele consists of the usual straw-coloured fluid, the tumour will be clear, and this criterion may be properly considered as nearly conclusive; but there must be recollected that the contents of the tunica vaginalis are sometimes brown and opake, and of course that in such instances the symptom transparency is absent. This may also be the case if the cyst itself happens to be as dense as you find it here. Nor are you to forget that a hernial sac may contain a sufficient quantity of fluid to throw indistinctness into inferences to be drawn from the preceding examination. A hydrocele of ordinary formation and compassing size is never even partially returnable into the cavity of the abdomen; and although it may be inconvenient from its bulk, and its weight be productive of lumbar uneasiness, it is free from all the digestive trouble usually, more or less, the attendant upon hernia of an equal magnitude.

I now show you two examples of a diseased tumour growing to the peritonæum; both have been taken from the same subject. In one the fatty deposition is attached to that membrane precisely where it lines the internal ring, and where you perceive on the inside this dimple-like mark. The whole of the mass is confined to the spermatic canal. In the second the tumour holds a lower situation, and hangs through the external ring; in front of the spermatic chord above it, is seen a small hernial sac, unusually narrow. Reflecting on these appearances, one would be disposed to attribute the engagement of the peritonæum to the external accumulation of adeps. Now, for such a growth may be competent to draw this membrane into this saccular form, I am not inclined to hazard a conjecture while I may be permitted to express my suspicion, arising from careful examination of both preparations, that it has a greater concern in the matter than I was first disposed to believe. That such tumours might be confounded with hernia, especially of the omental kind, you can readily ima-

gine, and if the sac contained intestine, you can understand how natural it would be to consider the disease as an entero-epiplocele. Here is a mass of firmly compacted fat five times as large as either of the former; it was detached from the small femoral hernial sac exhibited in this phial. In the other groin there was a tumour of the same character, but less extensive. In this plaster-cast, made from a superficial dissection, the position, size, and form are well represented. You would, perhaps, suppose that the subjects from which these were taken had been remarkable for their corpulency;—one was rather a thin body, and you can judge of the other by referring to the cast, in which the depth of the integuments is sufficiently exhibited. Now, to distinguish these growths from certain hernia having the same situation, I confess myself unable to pronounce. When omental protrusions are small and not of very long duration, the difficulty may be lessened by attending to the form of the tumour, which you observe is pyramidal, with its base downward; while in this small omental hernia the swelling is fuller and firmer at the abdominal than at the fundamental extremity. But this contrast is lost when the omentum acquires the bulk displayed by many of the preparations now before you. Whether the connexion which exists between the peritonæum and these adipose tumours is accompanied with any occasional irritation or irregularity, I have not had experience to determine; but if it be, it is plain it must lead to further doubts with respect to diagnosis.

It is a fact, with which most surgeons are well acquainted, that internal abscesses sometimes point above Poupart's ligament While the tumour lay yet at a distance from the surface, and the integuments were free from inflammation, I have absolutely known it to be mistaken for an inguinal hernia. The circumstances common to both are, similarity of situation, impulse upon coughing, altered prominence upon altered position, and some abdominal uneasiness. However, these similitudes can never deceive, if the following matters be held in consideration:—the enlarging abscess occupies an extent far exceeding the space to which an incipient inguinal hernia is confined; besides, its position is nearer the spine of the ilium, and there is a discernable hardness in the vicinity of the tumour. Personal history is commonly defective, yet it ought always to be referred to. Medical history, when it can be obtained, should never be neglected, wherever doubt distrusts our decision.

You have been too carefully instructed to be supposed ignorant of all known facts which concern the development of the testicle—at least, so far as is necessary to understand the remarks which are to follow. Causes, whose operation we cannot explain, occasionally disturb and to a certain extent defeat the ordinary course of nature, so that the descent of the testicle is interrupted, and this organ becomes hitched in some part of the spermatic canal or at one or other of its openings.

You are not strangers to these preparations. Formerly they were shown to you for a purpose different from the present, but allusion was made to the circumstances for which they are a second time presented to your notice, with alterations which you are now better prepared to understand. You have here a series of preparations in which you can trace every visible distance to which the testicle recedes, from the nidus where its nucleus was laid, until it reaches to its escape, beyond the boundaries of the abdomen. And in this second series, as you pass from one to the other, you can almost imagine that organ to move as you observe it, until it is finally arrested at its proper destination, where its full development is in time accomplished.

But I have said that this progression, the ultimate exclusion from the abdomen, is sometimes interrupted, an interruption which, however, seems to have no effect on natural growth, or on the perfection of natural functions. You have here a testis in its natural situation, and of a magnitude which is usual. Between it and these I now hold before you there is much agreement in point of size, yet the one of these lies behind the peritonæum, above the internal ring, the other is situated just outside the external ring, which is of sufficient diameter to have allowed it during lifetime to re-enter the spermatic canal.

That the testicle, arrested in its natural descent through or near to the inguinal canal, has been confounded with hernia, numerous recorded facts sufficiently declare; so that it is almost unnecessary to advance the assurance of personal experience.

However, to prove to you the liability to mistake, and the lamentable consequences to which such a mistake can lead, I cannot avoid mention of a matter

which I believe to be a fact, although none of the particulars passed under my own observation. A person was the subject of the operation, for strangulated inguinal hernia, shortly after the publication of Sir Astley Cooper's valuable work on the class of diseases which we are now engaged with, and when strangulation at the internal ring was supposed to be a much more common occurrence than we are now authorized to believe. The tumour, the presumed rupture, was returned into the abdomen. The man died, and it was then discovered that the testicle having been in a state of inflammatory enlargement, led to the performance of an operation, the result of which was death. When such calamities may befal in the hands of the experienced, surely minuteness, however laboured, cannot be culpable when its sole object is to defend the noviciate from error, and life from the danger to which the want of the warning you have now received may expose it.

I have been often consulted on account of many cases of supposed hernia, in which the non-descent of the testicle gave rise to a suspicion of that disease, and I have been surprised to find how ignorant patients were of the defect in their sexual perfection. It is not long since a young man applied to me under the impression that he was doubly ruptured. He was apprentice to a member of the profession, and professing to have heard lectures on the subject, he became alarmed about his own condition. He never had remarked that his scrotum was empty, and would scarcely believe me when I insisted on the fact. However, he was finally convinced, and thus one source of mental uneasiness was removed by substituting another in its place, but one not altogether as easily remedied, or to which the patient was easily reconciled.

APPLICATION OF PERCUSSION AND AUSCULTATION TO DISEASES OF THE HEART.

We now commence a most important class of diseases, which have been hitherto almost unknown, and even as yet are but little studied by the majority of practitioners. A concise but comprehensive account of diseases of the heart, from the latest and most accurate observers, cannot fail to prove instructive to many medical readers. I may be permitted to add, that I have closely investigated diseases of the heart in public practice, as a numerous class of attentive medical students can verify, as well as in private practice, and, therefore, introduce the result of my own experience.

DISEASES OF THE HEART IN GENERAL.

Diseases of the heart and pericardium should be studied in the following order according to M. Bouillaud, and whose observations, as the latest, and I believe the most correct, I shall present in the following article on this portion of pathology.* 1. Their precise site and anatomical characters. 2. The signs and diagnosis of these diseases. 3. Their causes. 4. Their nature and classification. 5. Their progress, duration, and terminations. 6. Their prognosis. 7. Their treatment. 8. Their complications with each other, and with diseases of other organs.

1. *Topography of diseases of the heart and their anatomical characters.* Disease of the whole heart is extremely rare, and no example has been hitherto recorded. Displacement of the organ does not form an exception to this position. Disease is generally confined to a certain part of the heart, as to a cavity or a certain portion of a cavity, or to the tissues which compose it. Thus the parietes of one or more cavities of this organ may be atrophied (thinned) or hypertrophied (thickened) with or without dilatation of the cavities; softened or indurated. &c.; or the valves and orifices may be primarily or specially altered. In other cases, the disease may be exclusively or principally, in the internal or external membrane, in the fleshy substance of the heart, &c. The lesions of this organ should be explored with the scalpel, chemical re-agents, and according to pathological anatomy; and we examine both its solid and fluid constituents. We investigate its molecular (Cruveilhier) and its physico-chemical anatomy, (Raspail). Like all other organs, the heart is subject to functional derangements, which are not visible, tangible or sensible, but similar to all others, it is liable to various changes of structure.

2. *General considerations on the physiological characters and diagnosis of diseases of the heart.* It is not difficult in the present state of science to deter-

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* Traité Clinique des Maladies du Cœur, précédé de Recherches nouvelles sur l'Anatomie et la Physiologie de cet organe. Par J. Bouillaud, Professeur de Clinique Medicale, &c. 1836.

mine the *anatomical* and *medical* diagnosis of cardiac diseases. These have been divided into local, general, sympathetic, and reactive, or dependent on re-action.

Of all the means of recognising diseases of the heart, auscultation and percussion, with palpation and inspection, are the best and most decisive.

There are two principal modes of re-action caused by diseased heart upon the entire system of the whole animal economy, and upon the different parts which compose it in particular. This re-action may be purely physical or mechanical, as in cases in which an enlarged heart displaces the lungs, and compresses them, &c. and also in cases in which induration of its valves and contraction of its orifices oppose the free passage of the blood, and occasion passive congestions in many organs, &c. This re-action is also said to be sympathetic and vital, when it terminates in febrile inflammation of the tissues of the heart. But in this case the re-action is multiplied; for while it is dynamic or vital, it also has a secondary influence by suppuration, which may partly infect the blood; and when the products of inflammation are not absorbed, they may mechanically obstruct the free exercise of the functions of the inflamed organ. It may be here remarked, that the morbid effusion in the first cases is very variable according to many circumstances, such as the greater or less sensibility of the patient, the greater or less acuteness of the disease, &c.

The influence of certain organic diseases of the heart on the general circulation and on the special circulation of certain viscera, as the lungs, liver, spleen and brain, is very powerful. It has frequently happened, that the secondary or symptomatic lesions which arise from this cause, were mistaken for primary or idiopathic complaints, and at other times were confounded with purely functional or nervous disorders. Who does not know, that before the admirable work of Corvisart, patients were supposed to labour under spasmodic, nervous and essential asthma, whose real complaints depended upon organic disease of the heart and large vessels? It is lamentable to state, that even in our times this error is too frequently committed. I have known many instances, and in one case, a gentleman had been bled from the arm no less than forty times for supposed asthma, though after the first interview I declared his complaint was disease of the heart, that he most probably would be affected with dropsy in a short time, a diagnosis that was proved by autopsy four months afterwards.

It will appear by the particular history of each of the diseases of the heart, that it may be as precisely known as that of any other organ or part of the body. Thus when the left ventricle is the seat of considerable hypertrophy, the face is generally red, animated, and the eyes brilliant; giddiness supervenes; and when the reaction is at its *acmé*, frequent and profuse hæmorrhages from the nose, and even cerebral hæmorrhage manifest themselves. When, on the contrary, the right ventricle is considerably hypertrophied, which is a rare occurrence, there is slight spitting of blood, and, in some cases, pulmonary apoplexy. The explanation of this difference is so simple and so well known to any educated medical practitioner, that it need not be mentioned here. If the course of the blood through the orifices and cavities of the heart encounters some strong obstacle, as happens in induration of the valves with marked contractions of the orifices to which they are adapted, there will be disturbance of the arterial, venous, and capillary circulation, according to the seat of the obstacle. Thus, when the obstacle is in the left cavities of the heart, the system of the pulmonary veins and the lung itself will feel the first effects, and then in succession the right cavities and veins, which empty themselves into the right auricle. If, on the contrary, the obstacle is in the right cavities of the heart, the superior and inferior cava, the veins of the liver (vena porta), those of the spleen, brain, and face, which empty themselves into the right auricle, become engorged with blood, and hence the passive congestions in all the parts just enumerated. These congestions have been erroneously attributed to certain lesions of the right cavities exclusively; but they may likewise accompany those of the left cavities; and it is certain, nevertheless, that they occur more rapidly, and in a higher degree, in the first than in the second; whilst passive engorgement of the lungs is not so immediate and necessary a consequence of obstacles to the circulation in the right cavities as those which are situated in the left. A due consideration of these facts will enable us to perceive the dangerous influences of diseases of the heart on those of the lungs, on the brain by predisposing to apoplexy, cerebral congestion, and various other diseases; on the serous

and cellular tissues, by congesting them and giving rise to general dropsy (anasarca), or œdema, or local dropsy (ascites, hydrothorax, hydrocephalus, &c.) Thus we observe the vast importance of *anatomical, physiological*, and *medical* diagnosis of organic diseases of the heart.

3. *General considerations on the causes of diseases of the heart.*—It is very remarkable that the causes of diseases of the heart have been almost overlooked until the present period. The consideration of diseases of the heart is one of the most recent points of pathology, and is as yet but very partially known to medical practitioners. The causes of diseases of the heart, like those of every other organ, offer, without doubt, peculiarities which those of other organs do not present; but it is no less true, that many of the diseases are developed under the same influences as those of all other organs in general. It is astonishing that this important truth has been until now, if not entirely unknown, at least very little attended to. There is no physical or moral influence, strictly speaking, which belongs to the study of physiology, which cannot, under certain circumstances, act as a predisposing or exciting cause of some disease of the heart. This is easily understood, when we reflect on the extensive and complicated influence which the heart possesses, as well as its intimate relations with the other organs of internal and external life, and, consequently, with external objects themselves. A vast number of conditions of external agents, violent exercises, the irregularities of regimen, vivid moral affections, &c. &c., are more or less powerful causes of diseases of the heart. This organ is also affected by acute and chronic diseases, and more particularly by febrile complaints, which are an especial and new source of morbid conditions, unfortunately as yet too slightly studied.

Numerous diseases of the heart itself may become exciting causes of other maladies of this organ. Thus, for example, a contraction of some one of the orifices terminates by causing a dilatation of the cavity of the heart, situated behind or above it; and violent palpitations may rupture a fleshy column, or a valvular tendon, or the parieties of the heart themselves, &c. &c. This position will be further verified by many future observations on the diseases of the heart.

The causes of diseases of the heart may be divided into three classes: 1. Mechanical and traumatic causes; 2. Physico-chemical causes; 3. Moral causes. Each of these classes comprehends a vast number of species.

This is not the place to enter into details of the long series of different kinds of exciting causes of the numerous diseases of the heart, but it may be useful to devote a few lines to the examination of the moral influences and atmospheric conditions.

The moral influences are among the most frequent causes of diseases of the heart. Corvisart was of opinion that "no one could doubt the fatal physical influences of the passions on the heart, and that organic lesions of this part were much more frequent during the horrible times of the revolution than in the ordinary calm of social order." M. Bouillaud doubts this assertion, and says that statistical documents are wanting to verify it. M. Schina, an Italian physician, has lately published a volume on the influences of the passions in causing diseases of the heart.

M. Bouillaud also contends, contrary to the opinion of Corvisart, that atmospheric vicissitudes are among the most common causes of pericarditis, as well as pleurisy and acute articular rheumatism, which is an inflammation of the serofibrous tissue of the articulations; that is to say, an articular pericarditis. He remarks, that rheumatismal pericarditis is well known; but he gives the important information that it may extend to the lining membrane of the heart, and then induce endocarditis, or internal pericarditis, "which is often complicated with rheumatismal pericarditis; and the history of its consequences in an acute and chronic state is, in my opinion, destined to change the pathology of the heart." Lastly, the influence of predisposition and hereditary transmission is not less evident in the development of diseases of the heart than any other organs. (Corvisart, Lancisi, Albertini, Bouillaud, &c.)

4. *General considerations on the nature of diseases of the heart, and their classifications.*—It is manifest that, without a preliminary knowledge of the anatomical characters, the physiological phenomena, and the causes of diseases of the heart, it will be impossible to determine the nature, or the methodic or philosophical classification of these diseases. It is for this reason that I have given the anatomy, physiology, and pathology of the heart on a former occasion; but the nature of its diseases in general ought to be deduced from the knowledge of the anatomical al-

teration, lesions of functions, and the pathogenic causes.

The nature of the diseases alone should be taken for a precise and satisfactory classification of the diseases of the heart, and not their symptoms or anatomical characters. If we take, for instance, the anatomical characters for the foundation of a classification, one and the same disease, pericarditis, for example, will belong to a number of different diseases, since its anatomical characters are so various. If the symptoms are taken for the basis of a classification, it will be the same. We may, however, class the symptoms and anatomical characters of diseases, but there will be an immense difference between this classification and a true nosological system.

It is remarkable that neither Corvisart, nor Laennec, nor preceding authors who wrote on diseases of the heart, attempted to arrange a scientific classification.

Dr. Schina is the only author who has tried to submit diseases of the heart to a truly scientific classification, such as has been mentioned. He has divided them into two orders, each of which has two classes. The first class comprehends dynamic diseases *(apparentemente dinamiche)*; the second, organic diseases, with dynamic predominance *(organische con predominio dinamico)*; the third, dynamic diseases with organic predominance *(dynamiche con predominio organico)*; the fourth, diseases simply organic *(simplicemente organische.* This author has placed a mixed genus between the two first and the two last classes: that which is found between the two first classes is devoted to dynamico-organic diseases with dynamic predominance *(dinamico-organiche con predominio dinamico)*; the intermediary genus of the last two classes embraces dynamico-organic diseases with organic predominance *(dinamico-organiche con predominio organico.)*

This classification is not so clear, in the opinion of M. Bouillaud, as can be desired, as the species comprised in each class and in the two mixed genera, are not distributed in a methodic manner; thus, for example, inflammation is found at one time in the first class, at another in the third, and also in the intermediary genus to the first and second class.

Thus, Dr. Schina places acute inflammation without apparent traces of material lesion in his first class *(inflammazone acuta, subacuta, senza reliquia di apparente lezione materiale)*; then acute, subacute, and slight inflammation following material lesions of dynamic quality, in his third class *(inflammazone acuta o lenta, seguita da lesioni materiali di qualità dinamica)*; and, lastly, he places in the intermediary genus the same degrees of inflammation succeeding material lesions of dynamic quantity (*inflammazione acuta, subacuta o lenta, seguita da lesioni materiali di quantità dinamica*). It must certainly be admitted that these distinctions are anything but remarkable for precision or clearness. This classification is open to many other objections equally cogent.

Dr. Hope proposed the following classification: 1. Inflammatory affections; 2. Organic affections; 3. Nervous affections; 4. Different affections, which cannot be placed with the preceding. He admits that he is not satisfied with this arrangement. In his opinion, inflammatory affections and organic lesions are not so intimately connected that they might not be separated.

It is evident that many lesions termed organic may and ought to be separated from inflammation; and it is no less certain that among the lesions of this kind there are some which are indissolubly united with inflammation, as Dr. Hope has admitted, when he has classed pericarditis with adhesions of the pericardium with the heart. "If," says Dr. Bouillaud, "this author has succeeded in proving a sound doctrine, in referring cellulous or fibrous adhesions, white or milk-like patches, and fibro-cartilaginous productions, observed on the external surface of the heart and in the pericardium of certain subjects to inflammation, he has fallen into a manifest contradiction in considering the same organic lesions as *essentially* independent of inflammation, when they occupy the internal membrane of the heart (endocarditis), which constitutes a true internal pericarditis. According to this method, it is sufficient to see that Dr. Hope has placed organic lesions of endocarditis among the consequences of inflammation, while he ranges, on the contrary, among special organic lesions, or non-consecutive on inflammation, the results of pericarditis, such as adhesions, certain vegetations, &c."—*Op. Cit.*

M. Bouillaud offers the following classification of diseases of the heart:—

The first class comprises all the lesions which affect the heart and its external structure in a purely physical and mechanical manner, as its position, form, colouration, extent, reciprocal disposition of

its different cavities, &c. &c. Then, solutions of continuity or of contiguity, dilatations, and contractions. These lesions are for the most part passive.

In the second class are diseases in some alteration of the vital conditions, functions, or physiological actions of the heart. The lesions of this class are essentially active, and, like vital actions, are divided into two orders, such as Bichat has comprised under the name of organic or nutritive, and those that he has comprised under the name of animal life. M. Bouillaud divides this second class into two orders; the one affects the function of organic life and of vital chemistry, or of physico-chemical life; the other is devoted to lesions of the functions of animal life, or excitation, or dynamia. To the first order belongs, under different genera, hypertrophy of the heart, in which the nutrition is augmented; atrophy, in which the nutrition is diminished; active hydro-pericardia, in which the secretion of the pericardium is augmented; inflammation of the different tissues of the heart, disease in which nutrition, secretion, absorption, capillary circulation, in a word, all the functions of organic or physico-chemical life are more or less profoundly altered,—the different secretory results of normal products in quantity and quality.

The genera and species of diseases in the two great classes which have been indicated, are founded on the different lesions of the various tissues of the heart.

5. *General considerations on the progress, terminations, and duration of diseases of the heart.*—There is a great difference between the progress of different diseases of the heart; thus, for example, between pericarditis, endocarditis, solution of continuity of some parts of the heart, and a purely nervous affection, such as palpitation, syncope, &c. Rupture of the parietes of the heart has no duration; it progresses with the rapidity of lightning, and it terminates in as sudden death as can be imagined; whilst nervous palpitations continue for many whole years, are regular, irregular and intermittent, and terminate without leaving any alteration in the structure of the heart.

The physico or chemico-vital diseases of the heart are those whose progress, duration, and variable terminations it is most important to make known*. These diseases are like the analogous ones in all organs in the body, progress slowly or rapidly, passing precipitately through their different degrees, and continuing only a few days, or describing slowly the course of their development, and their duration occupying several weeks, months, or years. Those which follow the first course are called *acute*, and those that follow the second are termed *chronic*, the latter being frequently consecutive on the former, and being their termination. But all the species of the class of diseases under consideration do not pass with the same facility into the acute and chronic form.

Thus hypertrophy or atrophy of the heart (augmentation or diminution of nutrition of the different tissues of this organ, and especially of its muscular substance), never developes in an acute form, but slowly. Increase and diminution of secretion obey the same law. Nevertheless, it is certain, that there are cases of hydro-pericardia (hydrops pericardii), which occur suddenly, and are really acute.

The ramollissements or softenings of the heart, which manifest themselves, independently of all actual or antecedent inflammation, during the course of certain general or constitutional affections (scurvy, scrofula, purulent diathesis, or infection, &c.), are subject to the progress which attends these last diseases; and if they are sometime *acute*, they are also sometimes *chronic*.

When we consider the importance of the heart in the animal economy, we can readily comprehend that when it is affected with violent and extensive acute inflammation, death will often happen in a few hours.

It is not correct to ascribe all the diseases of the heart to acute or chronic inflammation, no more than it would be those of any other organ. Thus many diseases are independent of both states of inflammation. No doubt many degenerescences of the heart and all other parts of the body have succeeded acute or chronic inflammation, but there are some which do not. Thus it would be absurd to ascribe urinary calculi, calculi in different organs, worms, hydatids, and different insects, which are accidentally

* The abbreviate terms physico or chemico-vital are applied by M. Bouillaud to diseases which consist in some perturbation of physical, chemical, or physico-chemical action by which internal or organic life is revealed to us, as exhalation, absorption, secretion, nutrition, &c.

developed in different parts of the body, to either acute or chronic inflammation in the parts in which they appear.

I cannot agree with Laennec that the terms disease and inflammation are synonymous.

The progress of most of the diseases of the heart as to type, is continued, though that of some is intermittent, such as the neuroses of the organ. Corvisart was of opinion, that organic diseases might be intermittent, and that they occurred with such periodicity, that they might be confounded with certain periodical disorders, such as asthma, &c. He instanced aneurism of the aorta, which sometimes resembled convulsive asthma. M. Bouillaud very properly considers this a contradiction of terms, and concludes, that when organic diseases assume an intermittent type, it is because they are complicated with an intermittent neurosis of the heart. Every careful observer of organic diseases of the heart, is well aware of the fact, that the symptoms of these maladies will frequently present paroxysms, more or less violent, without any known or appreciable cause, or as the consequence of excess or irregularity in regimen, violent exercise, a vivid moral affection, certain atmospheric conditions, &c., &c. These causes excite dyspnœa, and aggravate supposed asthma, when the real disease is one of the heart. In this class of maladies, auscultation is invaluable, as it enables us to form a correct diagnosis and a judicious treatment.

6. *General considerations on the prognosis of diseases of the heart.*—*Hæret lateri lethalis arundo,* was the epigraph at the head of Corvisart's work on Diseases of the Heart. He believed it sometimes possible to prevent the disease, but never to cure it. This was also the conclusion of Senac. It is very true, that when some diseases of the heart advance to a certain degree, they are hopeless; but it is equally true, that if discovered in the first stage of development, and judiciously treated, they may be as certainly cured as those of any other organ or part of the body. Corvisart referred to organic diseases in which there was degeneration of structure. Dr. Hope, on the contrary, affirms on the grounds of incontestible experience, that at the commencement, diseases of the heart are in most cases susceptible of perfect cure, and when this is impossible, that we possess the means of arresting their progress, so that the lives of the patients are very little shortened, and even sometimes not at all.

M. Bouillaud entertains this last opinion, and extensive experience has also convinced me of its accuracy. "The essentially organic diseases and those immediately mortal," says M. Bouillaud, "are ruptures of the parietes of the heart, the sudden coagulation of the blood which circulates in its cavities, and sometimes syncope. Among these which are essentially, but not immediately mortal, we should range, indurations of the valves with considerable contraction of the orifices to which they are adapted, certain pericardites, and chronic cardites.

"The dangerous diseases, but much less commonly fatal than Corvisart supposed, when properly treated, are acute pericarditis, to which I have added carditis and acute endocarditis, which that illustrious observer had not supposed to exist.

"In fine hypertrophy without dilatation or very considerable contraction of the cavities of the heart, with severe lesion of the valves, simple hypertrophy of these last, without remarkable obstruction to the course of the blood, adhesions and fibro-cartilaginous patches of the pericardium do not belong to the category of diseases necessarily mortal: I say more; it is this, that they are but accidentally fatal, and that proper hygienic cares, may very much retard their progress."

I can verify the correctness of the preceding statements from my own observations on several cases in hospital and private practice, and have invariably remarked, that diseases of the heart are as successfully treated as those of any other organ when discovered in their incipient state.

7. *General Considerations on the treatment of diseases of the heart.*—To treat the various diseases of the heart successfully, it is necessary to know them. If all practitioners possessed profound knowledge, we should not daily observe the mistakes made in the treatment of cardiac diseases, and see chlorotic patients with disease of the heart treated, with tonics and chalybeates, or others similarly affected, but supposed to labour under asthma, treated with antispasmodics.

The method of treatment must differ according to the nature of the disease, whether acute or chronic. But the treatment is based on the same principles as in similar diseases of other organs. But

these principles must be more or less modified according to the tissue and function of each particular organ; thus, a hypertrophy of the heart cannot be combatted in the same manner as a hypertrophy of the womb, the breast, or the tonsils.

The treatment of the violently acute inflammations of the heart (pericarditis, carditis, and endocarditis) require the most copious depletion frequently repeated. It is also to be recollected, that repose of the affected organ, so essential in all inflammations, cannot be obtained in those of the heart, and this want must be supplied, by increasing the energy of the above method of treatment. Venesection is the best means of reducing the action of the heart, although it cannot be urged to such an extent, without destroying life, as to cause absolute repose of the organ. M. Bouillaud is convinced that after free and repeated general and local depletion, digitalis is the best remedy; while others prefer nauseating doses, or full doses of tartarized antimony. He also cautions practitioners against timidity, and shows that many lives are sacrificed, and many chronic diseases of the heart, lungs, and other organs, allowed to supervene, when the most active antiphlogistic treatment is not rigorously pursued. He judiciously remarks, that if it is important to prevent the formation of accidental productions, such as adhesions, fibro-cartilaginous patches, different vegetations, &c., when inflammation attacks the principal organs in general, it is most especially essential, when the disease attacks the heart and its internal fibro-serous tissue. Such accidental productions, developed in the pleura or the pericardium, are not the cause of any immediate injury to health; but when seated in the valves of the heart, and opposing a great and constant obstacle to the circulation of the blood, they become the foundation of certain and inevitable death.

It is by this mechanism, if I may employ the term, that so many unfortunates are destroyed, who have laboured under a supposed pleurisy, pneumonia, or bronchitis, but in reality under an unknown endocarditis, the results of which are thickening, and induration of the valves, which can no longer perform their functions, while at the same time the orifices of the heart become so contracted, as not to permit the passage but of a very small column of blood. These morbid changes would not be dangerous in other organs less important to life, but it is evident that the principle already advanced as to the necessity of modifying the treatment according to tissue and the importance of an organ in the economy, is incontrovertible.

The sad certainty of the incurability of certain organic diseases of the heart, and of death which some of them induce, is a powerful motive to combat them in the commencement, and to strangle those acute diseases to which they so frequently succeed.

The treatment of each of this class of diseases will be given under its respective head, and I shall enumerate the particular cases in which digitalis, "the opium" of the heart, tartarized antimony, and the low diet or starving plan of Valsalva and Albertini are necessary.

8. *Remarks on the complications of diseases of the heart with each other, and with those of other organs.*—It very rarely happens that we meet with diseases of the heart in a simple or isolated state. Acute or chronic inflammation of the external membrane (pericardium) is very often complicated with that of the internal envelope; but the reverse seldom happens. This fact was recognised within the last three years only by M. Bouillaud. It is easily explained when we remember that both membranes are sero-fibrous, and that their proximity is so great in certain points that they touch each other on their external surface at the interstices of the fleshy fasiculi of the auricles, and regions of the auriculo-ventricular openings. The cellular and muscular tissue of the heart often participate more or less in inflammation of the double fibro-serous envelope of the organ.

Inflammation of the external and internal membranes of the heart, is complicated in a very great number of cases with inflammation of the pleura and lungs; or with that of the sero-fibrous tissue of the articulations (acute articular rheumatism). M. Bouillaud has remarked these complications in half of the cases he observed during the years 1833-34. He has also noticed an anormal excitation of the heart in continued fevers, which did not amount to inflammation properly so called.

The purely nervous affections of the heart, and especially palpitations, are generally complicated with disorders of the same class in other organs, such as the stomach, intestines, respiratory organs, those of vision, audition, olfaction, and palpation, and even of the brain itself.

Another class of palpitations succeed anemia, from loss of blood by hemorrhage, and also chlorosis. In the last disease there is the bruit de diable or musical whistle of the carotid arteries, and subclavians.

The complications of inflammations of the heart, pericardium, and endocardium, with the aorta and principal vessels, are so common as to be known to every observant practitioner, and these will, with many other complications, be described in the special history of each.

M. Bouillaud has given the history of twenty-five cases of inflammations of the heart, complicated with pleuritis and pneumonia, and some of them with both.

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LIFE OF JOHN HUNTER.

(*Continued from p.* 238.)

The next discoveries of Mr. Hunter attracted universal attention, and these were still in comparative anatomy—a science now rendered so popular in this country, by the indefatigable industry and laborious researches of Dr. Grant.

All rare animals were now sent to Mr. Hunter—the peculiarities of the torpedo and of the gymnotus electricus were submitted to his examination: a dead elephant, a curious pheasant, the free martin, the gillaroo trout, all found their way to the man who was never weary of investigating, always happy in communicating, and whose reports on these subjects were readily understood, and have never been contradicted.

"In the course of his pursuits," says his biographer, "Mr. Hunter met with many parts of animals where the natural appearances could not be preserved; and others, in which the minuter vessels could not be distinctly seen when kept in spirits: it was therefore necessary to have them drawn, either at the moment, or before they were put into bottles. The expense of employing professed draftsmen, the difficulty of procuring them, and the disadvantage which they laboured under in being ignorant of the subject they were to represent, made him desirous of having an able person in his house entirely for that purpose.

"With this view he engaged an ingenious young artist to live with him for ten years; his time to be wholly employed as a draftsman, and in making anatomical preparations. This gentleman, whose name was Bell, soon became a very good practical anatomist, and from that knowledge was enabled to give a spirited and accurate resemblance of the subjects he drew, such as is rarely to be met with in representations of anatomical subjects. By his labours Mr. Hunter's Collection is enriched with a considerable number of very valuable drawings, and a great variety of curious and delicate anatomical preparations*."

We are informed that Mr. Bell very soon imbibed all the ardour of his employer, retaining all the diligence of a tyro, with the modesty becoming that character. He worked continually with his knife, his forceps, and pencil, for the term already mentioned, during which he was also engaged in copying Mr. Hunter's Lectures. By this time he could not fail to become "a skilful anatomist and good practical surgeon. In the year 1789, he received an appointment, as assistant-surgeon, in the service of the Honourable East India Company, for the settlement of Bencoolen, in Sumatra. This appointment, procured by the friendship of Sir Joseph Banks, he accepted with a double view; the one to improve his fortune, the other to collect specimens in natural history. In both these pursuits he was successful beyond his most sanguine expectations: he sent home some very rare specimens of animals and corals, and two papers, since printed in the Philosophical Transactions, one on the double-horned rhinoceros, the other giving a description of an uncommonly formed fish; but, unfortunately for science, he died of a fever, very much regretted by his friends, in the year 1792."

Such was the untimely fate of one of Mr. Hunter's earliest pupils. But happily for science, his successor, Mr. Clift, remains, to luxuriate amid the delights of the

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* "The engravings inserted in Mr. Hunter's Treatise of the Venereal Disease, in his book upon the Animal Œconomy, and most of these contained in his work on the Blood Inflammation and Gunshot Wounds are taken from Mr. Bell's drawings, and will remain as proofs of his abilities in that particular line of drawing."—(Sir Everard Home, pages xxvii and xxxv.)

Hunterian Collection, and to enrich it under the auspices of a well-endowed College. Recent occurrences have thrown much light on this Collection, and these will be noticed before the conclusion of this biographical sketch.

About the year 1776, the efforts of the Humane Society for the restoration of bodies apparently dead by drowning, very much occupied the public attention. Dr. Cogan had first introduced the subject from Holland, and the industry of Dr. Hawes (relative, I presume, to Mr. Hawes, M. P.) by never suffering it to rest, at last produced a royal establishment. It was not probable that the co-operation of Mr. Hunter should be spared on this occasion. He produced a paper before the Royal Society, in the year 1776, containing "Proposals for the Recovery of Persons apparently drowned." This title is transcribed at length from the "Animal Œconomy," because one of his biographers has miscalled it, "On the best Mode of recovering drowned Persons." Mr. Hunter seems to have been the only individual aware of the difficulties attending the question, and that very circumstance made him as cautious in his language as we shall find him on all other occasions. "In this paper," says one of his biographers, "which is the foundation of every thing rational that has since appeared on this important subject, a distinction is first made between absolute death, and a mere suspension of the functions by which life is supported. This is illustrated by the long suspended actions of life in certain animals, and, under certain conditions, for a shorter time in man.

"An inquiry next follows concerning the different modes of dying, whether by disease or accident; in both of which he gives a further illustration of the difference between the mere cessation of actions and absolute universal death. The latter he shows sometimes takes place, immediately on the cessation of all the actions of life, but that more commonly the parts retain life for some time after such actions have ceased. This led him to explain the reason why, under certain circumstances, every attempt at resuscitation must be vain. And in the enumeration of these, and the various causes which might produce each, if he had not his own death in view, he has at least described its immediate cause, and its more obvious effects, with a perspicuity which could not have been exceeded if he had attended the examination of his own corpse."

The importance of this part of physiology as regards public medicine, or the recovery of persons apparently dead from drowning, hanging, suffocation by noxious gases, and the proper time for burial, must be evident to every medical practitioner*.

Mr. Hunter's paper also contains a description of many signs of life and death, which have been since too much overlooked. They will be better introduced by some remarks on the paper itself. At present I shall only notice what may be called a vulgar error; but, like many others of the kind, it is only erroneous in the mode of expression, the external phenomena being very correctly marked. Many people, who lead a seafaring life, have a mistaken opinion, that when a dead body floats, it is because what they conceive *its swim* is broken; and if this floating takes place soon after death, they conceive it arises from the swim being broken in the act of dying, or immediately after. Mr. Hunter's paper readily explains the cause of this variety in the period of floating, and the source of the erroneous opinion.

He explained it as follows:—The immediate floating of a body after death will depend on the circumstance of a person ceasing to breathe with the lungs full of air, or after it is nearly expelled. If the latter, the period at which the body becomes buoyant will depend on the commencement of putrefaction, by which gas will be extricated, and filling all the cavities of the body, will expand its surface, and render it lighter than water. If absolute universal death takes place at the moment of the accident, putrefaction follows with great rapidity, and the body sooner becomes buoyant. If, on the contrary, the parts retain their life, though the actions by which life was supported cannot be maintained, putrefaction will not commence till life ceases: air or gas, therefore, will not be extricated, and the body will be a long time before it floats. By a proper attention to this difference, Mr. Hunter explained how it happened that, under some circumstances, no industry or skill could produce reanimation after an immersion comparatively short to what had occurred in other more successful instances.

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* I have fully described all the bearings of the numerous questions concerning it, in another place—(Manual of Medical Jurisprudence and State Medicine, Second edition, 1836).

The morbid effects by drowning are graphically described by Sir B. Brodie, who is one of the patrons of the Humane Society.—(See Paris and Ryan's Jurisprudence).

This paper was presented to the Royal Society in the year 1776. In the same year Dr. Hunter was made Surgeon Extraordinary to His Majesty. "In the autumn," Sir Everard Home observes, (it appears by another passage that it was late in the spring), "he was taken extremely ill; and the nature of his complaints made his friends, as well as himself, consider his life to be in danger. When he reflected upon his own situation, that all his fortune had been expended in his pursuits, and that his family had no provision but what should arise from the sale of his collection, he became very solicitous to give it its full value, by leaving it in a state of arrangement.

"As soon as he was able to leave his room, his first object was to make a catalogue of his collection; but his health requiring him to go to Bath, I was employed, with the assistance of Mr. Bell, during his absence in making descriptions of the preparations, leaving blanks for such as I was not acquainted with. His complaints were a good deal relieved, but his impatience to return to town made him come back before he was well; he continued, however, to amend, and very soon recovered.

"In 1778 he published the second part of his Treatise on the Teeth; in which their diseases, and the mode of treatment, are considered. This rendered his work upon that subject complete. He published also, in the Philosophical Transactions, a paper on the Heat of Animals and Vegetables.

"I had now," continues Sir Everard, "lived six years with Mr. Hunter, and had completed my education. His expenses had always exceeded his income; I had therefore no emolument to expect from remaining in his house, which made it necessary for me to take up some line for my own support; and Admiral Keppel's action with the French fleet was the means of procuring me a very eligible situation."

"The above paragraph," observes Dr. Adams, "relating principally, as the succeeding one does entirely, to the biographer, would have been omitted, had it not shown, in the most useful of all human occupations, how slow was the emolument of a character whose name resounds throughout the civilized world, whose collection makes no inconsiderable boast of the metropolis, and 'whose labours,' to use the words of one of his adversaries, 'have done more to improve the science of surgery than all other surgeons of Europe, with all their works, had done before him.' Mr. Hunter had now arrived at his fiftieth year, thirty of which had been devoted to the profession. He had enjoyed such means of improvement as few, if any other person, could boast; he had improved them with a diligence never exceeded, and with a capacity never yet equalled. His introduction to the public was not less favourable: immediately on his appearance in London, he was attached to the first and almost the only anatomical school, in which, soon after his arrival, he became the principal instructor in the practical branch. He had been eleven years member of the Royal Society, and nine a hospital surgeon. He was noticed, admired, and respected by the most enlightened characters of the age, and had enjoyed the patronage of his brother, at that time in high credit with the first nobility, and with royalty itself. Nor does it appear that he had been engaged in any extraordinary expenses. The ground in Earl's Court had been purchased and the house erected twenty years before*. For the last seven years his town residence was in Jermyn Street, without additional rent. Here the principal rooms were devoted to his museum, and practical dissection was carried on in other parts of his house. Though his family had increased, only two survived, and these were still of an age to be but little expensive. A becoming economy, there cannot be a question, prevailed in every department, and his personal expenses were confined to his preparations; yet five years after this period, when he purchased a leasehold in Leicester Square, he assured Dr. Adams that he was under the necessity of mortgaging before he could pay for it. For some time afterwards he used to regret that all he could collect in fees went to carpenters and bricklayers, whilst the sum expended

* It is a curious coincidence that the mansion at Earl's Court is now one of the best regulated private lunatic asylums in the kingdom; it is for the reception of the softer sex, and is recommended by Sir Henry Halford and many other eminent physicians.

was scarcely sufficient to furnish the library of a literary character. His income for thirty-three years did not exceed 1000*l.* annually. These difficulties may, perhaps, be partly imputed to debts gradually contracted, and to that generosity and want of prudence which experience had not altered or improved. But should not his industry, with such fair expectations, and without habits of extravagance, have produced returns more than equal to all these calls?"

It was not to be supposed that it might. Mr. Hunter's manners and pursuits were not calculated to influence the world, *alias* the vulgar; they led him to aim at a more lasting and imperishable renown. The investigator of nature could not possibly be a worldly person; he sang, as the poet has it, higher strains. The dissecting-room or the study is not the place to astonish the profane vulgar or to display worldly wisdom. A fool in medicine, with every day policy, would throw a thousand Hunters into the shade, so far as making money is concerned; but the name of Hunter will be venerated when those of millions of such money-makers are consigned to oblivion.

We now arrive at a period of Mr. Hunter's life about which there is much difference of opinion, but I shall, I think, prove it most honourable to his character.

At this period the celebrated trial of Donellan occurred, for the murder of Sir Theodosius Boughton. The Oxford professor of anatomy most properly decided that the baronet was poisoned: such also was the opinion of the medical gentlemen who examined the body. The universal attention which so important and remarkable an event excited naturally induced a recollection of Mr. Hunter's paper on the Solution of the Stomach, in the Philosophical Transactions. The minute detail of this trial will be found in all the recent works on medical jurisprudence.

"Nothing could be more simple or more honest than Mr. Hunter's evidence; simple, inasmuch as it was confined to subjects within his own knowledge; and honest, as no torture of examination, or a wish to serve the culprit, in whose behalf he was subpœnaed, could induce him to offer even a surmise beyond what his actual experiments would authorise.

"On this occasion," says Dr. Adams, "I cannot but mention a remark I once heard from Mr. Shelton, the coroner for London, who has held so many important offices for so many years without once committing himself, or without being once suspected of the slightest deviation from his duty through ignorance, neglect, or any other motive. When the name of Mr. Hunter accidentally occurred in conversation, he took the opportunity of inquiring the opinion entertained of him by the faculty, and concluded the subject by remarking, that he thought him very unhandsomely treated in the trial of Donellan."

I shall allow the reader to form his own opinion of this evidence, by inserting a copy of Mr. Hunter's examination in court on the trial of Captain Donellan, who was, in the opinion of all British writers on forensic medicine, justly convicted and executed for poisoning Sir Theodosius Boughton.

Extract from the Trial of John Donellan, *Esq. for the wilful Murder of* Sir Theodosius Edward Boughton, *Bart.*

Mr. John Hunter *sworn; Examined by* Mr. Newnham.

Q. Have you heard the evidence that has been given by these gentlemen? *A.* I have been present the whole time.

Q. Did you hear Lady Boughton's evidence? *A.* I heard the whole.

Q. Did you attend to the symptoms her ladyship described, as appearing upon Sir Theodosius Boughton, after the medicine was given him? *A.* I did.

Q. Can any certain inference, upon physical or chirurgical principles, be drawn from those symptoms, or from the appearances externally or internally of the body, to enable you, in your judgment, to decide that the death was occasioned by poison? *A.* I was in London then; a gentleman who is in Court waited upon me with a copy of the examination of Mr. Powell and Lady Boughton, and an account of the dissection, and the physical gentlemen's opinion upon that dissection.

Q. I don't wish you to go into that; I put my question in a general way? *A.* The whole appearances upon the dissection explain nothing but putrefaction.

Q. You have been long in the habit of dissecting human subjects? I presume you have dissected more than any man in Europe? *A.* I have dissected some thousands during these thirty-three years.

Q. Are those appearances you have heard described such, in your judgment, as are the result of putrefaction in dead subjects? *A.* Entirely.

Q. Are the symptoms that appeared after the medicine was given, such as necessarily conclude that the person had taken poison? *A.* Certainly not.

Q. If an apoplexy had come on, would not the symptoms have been nearly or somewhat similar? *A.* Very much the same.

Q. Have you ever known or heard of a young subject dying of an apoplectic or epileptic fit? *A.* Certainly; but with regard to the apoplexy, not so frequent: young subjects will perhaps die more frequently of epilepsies than old ones; children are dying every day from teething, which is a species of epilepsy arising from an irritation.

Q. Did you ever, in your practice, know an instance of laurel-water being given to a human subject. *A.* No, never.

Q. Is any certain analogy to be drawn from the effects of any given species of poison upon an animal of the brute creation, to that it may have upon a human subject? *A.* As far as my experience goes, which is not a very confined one, because I have poisoned some thousands of animals, they are very nearly the same; opium, for instance, will poison a dog similar to a man; arsenic will have very near the same effect upon a dog as it would have, I take for granted, upon a man. I know something of the effects of them, and I believe their operations will be nearly similar.

Q. Are there not many things which will kill animals almost instantaneously, that will have no detrimental or noxious effect upon a human subject; spirits, for instance, occur to me? *A.* I apprehend a great deal depends upon the mode of experiment; no man is fit to make one, but those who have made many, and paid considerable attention to all the circumstances that relate to experiments. It is a common experiment, which I believe seldom fails, and it is in the mouth of every body, that a little brandy will kill a cat: I have made the experiment, and have killed several cats, but it is a false experiment; in all those cases where it kills the cat, it kills the cat by getting into her lungs, not into her stomach, because, if you convey the same quantity of brandy, or three times as much, into the stomach, in such a way as the lungs shall not be affected, the cat will not die. Now in those experiments that are made by forcing an animal to drink, there are two operations going on; one is, a refusing the liquor by the animal, its kicking and working with its throat to refuse it; the other is, the forcing the liquor upon the animal: and there are very few operations of that kind, but some of the liquor gets into the lungs; I have known it from experience.

Q. If you had been called upon to dissect a body suspected to have died of poison, should you or not have thought it necessary to have pursued your search through the guts? *A.* Certainly.

Q. Do you not apprehend, that you would have been more likely to receive information from thence than any other part of the frame? *A.* That is the track of the poison, and I should certainly have followed that track through.

Q. You have heard of the froth issuing from Sir Theodosius's mouth a minute or two before he died; is that peculiar to a man dying of poison, or is it not very common in many other complaints? *A.* I fancy it is a general effect of people dying in what you may call health, in an apoplexy or epilepsy, in all sudden deaths, where the person was a moment before that in perfect health.

Q. Have you ever had an opportunity of seeing such appearances upon such subjects? *A.* Hundreds of times.

Q. Should you consider yourself bound, by such an appearance, to impute the death of the subject to poison? *A.* No, certainly not; I should rather suspect an apoplexy: and I wish in this case the head had been opened to remove all doubts.

Q. If the head had been opened, do you apprehend all doubts would have been removed? *A.* It would have been still farther removed, because, although the body was putrid, so that one could not tell whether it was a recent inflammation, yet an apoplexy arises from an extravasation of blood in the brain, which would have laid in a coagulum. I apprehend, although the body was putrid, that would have been much more visible than the effect any poison could have had upon the stomach or intestines.

Q. Then, in your judgment, upon the appearances the gentlemen have described,

no inference can be drawn from thence that Sir Theodosius Boughton died of poison? *A.* Certainly not; it does not give the least suspicion.

Mr. John Hunter, *cross-examined by* Mr. Howorth.

Q. Having heard the account to-day, that Sir Theodosius Boughton, apparently in perfect health, had swallowed a draught which had produced the symptoms described, I ask you, whether any reasonable man can entertain a doubt that that draught, whatever it was, produced those appearances? *A.* I don't know well what answer to make to that question.

Q. Having heard the account given of the health of this young gentleman on that morning, previous to taking the draught, and the symptoms that were produced immediately upon taking the draught, I ask your opinion, as a man of judgment, whether you don't think that draught was the occasion of his death? *A.* With regard to his being in health, that explains nothing; we frequently, and indeed generally, see the healthiest people die suddenly, therefore I shall lay little stress upon that: as to the circumstances of the draught, I own they are suspicious; every man is just as good a judge as I am.

Court. You are to give your opinion upon the symptoms only, not upon any other evidence given.

Mr. *Howorth.* Upon the symptoms immediately produced, after the swallowing of that draught, I ask whether, in your judgment and opinion, that draught did not occasion his death? *A.* I can only say, that it is a circumstance in favour of such an opinion.

Court. That the draught was the occasion of his death? *A.* No: because the symptoms afterwards are those of a man dying, who was in perfect health; a man dying of epilepsy or apoplexy, the symptoms would give one those general ideas.

Court. It is the general idea you are asked about now, from the symptoms which appeared upon Sir Theodosius Boughton immediately after he took the draught, followed by his death so very soon after, whether, upon that part of the case, you are of opinion, that the draught was the occasion of his death? *A.* If I knew the draught was poison, I should say, most probably, that the symptoms arose from that: but, when I don't know that the draught was poison; when I consider that a number of other things might occasion his death, I cannot answer positively to it.

Court. You recollect the circumstance that was mentioned of a violent heaving in the stomach? *A.* All that is the effect of the voluntary action being lost, and nothing going on but the involuntary.

Mr. *Howorth.* Then you decline giving any opinion upon the subject? *A.* I don't form any opinion to myself; I cannot form an opinion, because I can conceive if he had taken a draught of poison, it arose from that: I can conceive it might arise from other causes.

Q. If you are not at all acquainted with the effects and operations of distilled laurel-water, whether the having swallowed a draught of that, would not have produced the symptoms described? *A.* I should suppose it would: I can only say this of the experiments I have made of laurel-water upon animals, it has not been near so quick. I have injected laurel-water directly into the blood of dogs, and they have not died; I have thrown laurel-water, with a precaution, into the stomach, and it never produced so quick an effect with me, as described by those gentlemen.

Q. But you admit that laurel-water would have produced symptoms such as have been described? *A.* I can conceive it might.

Mr. *Newnham.* Would not an apoplexy, or an epilepsy, if it had seized Sir Theodosius Boughton at this time, though he had taken no physic at all, have produced similar symptoms too? *A.* Certainly.

Q. Where a father has died of an apoplexy, is not that understood, in some measure, to be constitutional? *A.* There is no disease whatever, that becomes constitutional, but what can be given to a child. There is no disease which is acquired, that can be given to a child; but whatever is constitutional in the father, the father has a power of giving that to the children; by which means it becomes what is called hereditary. There is no such thing as an hereditary disease, but there is an hereditary disposition for a disease.

Mr. *Howorth.* Do you call apoplexy constitutional? *A.* We see most diseases

are constitutional: the small-pox is constitutional, though it requires an immediate cause to produce the effects. The venereal disease is hereditary. I conceive apoplexy as much constitutional as any disease whatever.

Q. Is apoplexy likely to attack a thin young man who had been in a course of taking cooling medicines before? *A.* Not so likely, surely, as another man; but I have, in my account of dissections, two young women dying of apoplexies.

Q. But in such an habit of body, particularly attended with the circumstance of having taken cooling medicines, it was very unlikely to happen? *A.* I do not know the nature of medicines so well as to know that it would hinder an apoplexy taking effect.

Court. Give me your opinion in the best manner you can, one way or the other, whether, upon the whole of the symptoms described, the death proceeded from that medicine, or any other cause? *A.* I do not mean to equivocate; but, when I tell the sentiments of my own mind, what I feel at the time, I can give nothing decisive."

"*Extract from* Mr. Justice Buller's *Charge.*

"For the prisoner, you have had one gentleman called, who is likewise of the faculty, and a very able man. I can hardly say what his opinion is, for he does not seem to have formed any opinion at all of the matter. He, at first, said he could not form an opinion whether the death was, or was not, occasioned by the poison, because he could conceive that it might be ascribed to other causes. I wished, very much to have got a direct answer from Mr. Hunter, if I could, what, upon the whole, was now the result of his attention and application to the subject, and what was his present opinion; but he says he can say nothing decisive. So that, upon this point, if you are to determine upon the evidence of the gentlemen who are skilled in the faculty only, you have the *very positive* opinion of four or five gentlemen of the faculty, that the deceased did die of poison. On the other side, you have what I really cannot myself call more than the *doubt* of another; for it is agreed by Mr. Hunter, that the laurel-water would produce the symptoms which are described. He says, an epilepsy or apoplexy would produce the same symptoms; but, as to an apoplexy, it is not likely to attack so young, and so thin a man as Sir Theodosius was; and, as to an epilepsy, the other witnesses tell you, they don't think the symptoms which have been spoken of, do show that Sir Theodosius had any epilepsy at the time."

"It cannot be necessary to remark," says Dr. Adams, "that Mr. Hunter's caution arose entirely from his determination to give no opinion beyond his knowledge. The mode of dying, and the appearances after death, were all that he wished to speak to. On these he showed no indecision convinced, from a practical knowledge, that they might arise from other causes besides poison."

It would be foreign to my present purpose to comment upon this evidence, though it is, in my opinion, open to remark. But we should remember the state of medical science, and more particularly that of Forensic Medicine, in the time of the illustrious Hunter. He attested what he knew from personal observation, he doubted every thing else, and well he might; and he was too conscientious to sacrifice the life of a fellow-being, when he was not thoroughly convinced of his guilt from careful and faithful observation. He may be blamed by some of the moderns with larger and later views, but they will be fortunate, should their names be ever entitled to hold a place in the records of science far lower than that of John Hunter. He could not possibly have thought as the other medical witnesses. They lived in or near the place where the murder was committed. They necessarily heard much more of the extra-forensic rumours than Mr. Hunter, who was summoned from London, and whose evidence solely rested upon his own experience It ought to be borne in mind, that the state of medicine at the time was deplorably unsatisfactory, and no one knew this better than the radical reformer of the science; he therefore spoke from his own conviction.

(*To be continued.*)

PUBLIC MEDICAL REPORT IN IRELAND

(Continued from page 245.)

We continue the report of the late Sir David Barry and Dr. Corrie of the Public Charities in Ireland.—

County Hospitals or Infirmaries.—For the use of the sick poor, an infirmary, supported by a county rate, is established in each county; but the accommodation afforded, *i. e.* the number of beds, is not in any determinate proportion to the population of the county; for example, a fixed number for every 10,000 inhabitants.

The situation has been usually determined by that of the county or assize town; hence the hospital, instead of being central, is frequently placed at the verge of the county; in the spot therefore least convenient for the majority of the inhabitants. But supposing the situation the best possible, and the accommodation adequate, the charity would still be of no great service to the bulk of the people. A population at a distance of ten or fifteen miles from an hospital for accidents and acute cases, receives very little benefit from it. Delay and motion are obstacles of the most serious nature, often such as cannot practically be overcome. There is another circumstance not to be overlooked; the repugnance which still unfortunately exists against going into an hospital at all: a feeling which has irresistable force when the hospital is at such a distance as to render frequent communications with relatives impossible.

County hospitals have not been built according to any general plan: the earliest established were in some instances placed in, and still occupy, buildings intended for other purposes, and contain small, ill-ventilated, inconvenient wards. Of late years, however several very handsome buildings have been erected, and on excellent principles; yet in one of the most recently opened, a very large portion has been appropriated for the residence of the chief medical officer; an arrangement respecting which much difference of opinion may arise, whether the chief medical attendant, or indeed any officer with a family and servants, ought to be permitted to reside within the walls of the hospital.

To most of these charities, from a few roods to two or more acres of land are attached, not occupied however according to any general regulations, part being usually cultivated as a kitchen garden, and the remainder given up to the resident medical officer; very little is left for the use of the convalescent patients. The chief medical officers *must be licentiates of the Royal College* of Surgeons, Ireland; generally there is only one, who may undertake in addition the duties of the apothecary, and reside within the walls. A more recent and improved plan is to have several non-resident physicians or surgeons and one-resident unmarried house-surgeon and apothecary.

The salary fixed by the Act for the chief medical officer is 100*l.* Irish currency, but he almost invariably holds some other appointment at about the same salary, viz:—medical attendant to the gaol or lunatic asylum, perhaps to both. At those hospitals to which there are several medical officers of equal rank attached, the salary is equally divided among them.

The election of the officers is vested in the corporation; the county grand jury have no voice.

At all the hospitals we inspected, the registry department appeared to be well and accurately kept, and to afford correct data from which the average expense per annum of one bed might be calculated.

Any member of the corporation may give a ticket of admission to any poor sick person in the county; accidents, provided they occur in the county, are admitted immediately on application without a ticket.

Under the present system, many cases of a very chronic nature are admitted, and the hospital thus rendered little better than a poor-house, beds being for a length of time occupied by individuals who would do equally well in a poor-house or at home, whilst a succession of persons suffering from acute diseases, and to whose cases immediate attention is of the utmost importance, are excluded from want of accommodation.

It is the custom at almost all infirmaries to give advice and medicine to extern patients, but not to pay domiciliary visits.

We always observed that an ample supply was provided of good food, and of such articles as are usually denominated extras.

The regulations and arrangements for serving out the daily ordinary diets are in many instances defective; but to these the strictest attention ought always to be paid, otherwise the public can never feel sure that the institution is economically and justly conducted.

Most of the county hospitals which we visited are admirably calculated for affording good surgical and medical in-

struction; this is but rarely given; we cannot help, however, particularising one instance. A system has been established at Maryborough, which appears admirably calculated to produce the desired effects.

In most counties are found one or two gentlemen (belonging to the infirmary corporation), who devote great attention to the affairs of the charity.

The treasurer is responsible, and gives an annual account of the sums received by him; but we did not always find in operation that system of management which is the most likely to ensure the expenditure of the funds to the greatest possible advantage. It is one (and a comparatively easy) thing to guard against embezzlement; another (and a much more difficult) thing to have the funds laid out so as to produce the greatest amount of good. A great deal towards effecting this latter object might be done by introducing into the management of civil hospitals, one general system, with graduated responsibility and regular inspection, such as exists, and has been found so advantageous, in the army hospital department.

Chapter II.—Dispensaries.—These remarks will be best introduced by a very brief notice of the Acts of Parliament relative to these charities. Dispensaries are first mentioned in an Act of the 45th of George the Third, intituled, "An Act for establishing Public Infirmaries in Ireland;" and it is therein enacted that it shall be lawful for the grand jury to grant a sum of money "for establishing a dispensary" equal to a subscribed sum, the whole to be expended in affording medical relief to the sick poor, and to be placed under the control of the infirmary corporation, together with subscribers of not less than one guinea.

2. By an Act 58 George the Third, c. 47, the entire management is vested in the said guinea subscribers alone, not conjointly with the infirmary corporation; and the sum or sums received are to be applied under their direction, or such committee of them, not fewer in number than five, as they shall appoint for that purpose. The presentment must be paid to the dispensary treasurer, who must account to the grand jury half yearly for the whole sum expended.

3. Dispensaries are again mentioned in an Act 3 George the Fourth, which, in consequence of a doubt that had previously existed, enacts that it shall be lawful for all grand juries, "term" as well as "assize," to grant a presentment. In no other Act do we find mention made of these charities.

1. The Acts, therefore, only legalize the presentment; there is no clause which compels the grand jury to present any sum; and though the sum presented is generally equal to the sum subscribed, there are many cases in which it is less.

2. The entire direction is vested in the subscribers of not less than one guinea, who may pass bye-laws, &c., for the regulation of the dispensary, but they are not called upon to frame any; and where bye-laws are passed, however judicious, there is no person whose duty it is to see that they are properly attended to.

3. The grand jury cannot directly interfere in the management of a dispensary; but by diminishing or refusing a presentment, it exercises an indirect control, and in some counties enforces a compliance with a few general regulations.

It is, however, most important to recollect, that though the diminishing or withdrawing of the funds may inconvenience the parties really to blame, it is the *sick poor*, who have been, it is supposed, already wrongfully used, who must necessarily be the severest sufferers.

Population and Extent of Country.—1. Our inquiries on these particulars could not often be answered with any exactness, frequently neither the medical officer nor the governors present could give us any accurate information thereon: the greatest diversity, however, in both respects exists; and examples are reported of districts containing 20,000 inhabitants, others only 9,000 or 10,000; and a population varying between these extremes is found dispersed over a district, in some instances, more than fifteen miles in diameter, in other instances not more than eight or ten.

The larger districts have not been divided, it having been found impossible to procure any augmentation of the funds, and they being barely sufficient to support one establishment.

Some gentlemen, whom we had the honour of meeting, and who had paid some attention to the subject, thought that with a rural population, such as, on an average, Ireland possesses, a dispensary district should not have a diameter of more than six or eight miles; others thought that one with a diameter of ten miles was not too large to place under the care of one medical officer; the engagement being, as now, that he should,

when called upon, visit any part of his district at any hour of the day or night.

We do not find the number of dispensaries in a county to be proportionate to the size of the county, nor is the situation determined by that of the population. These two important circumstances depend upon the feelings and wishes of the subscribers. We are not aware, however, of any county in which dispensaries are too numerous, neither did we meet with any instance of a dispensary not having an adequate population depending upon it; but examples of the contrary are too easily found.

There are many extensive districts, some of them containing considerable towns, in which there is no public medical charity of any description.

In some districts good and substantial buildings, more or less conveniently contrived, have been erected expressly for dispensary purposes, which contain rooms for the medical attendant, a good dispensary, and a waiting-room for the patients. Sometimes, however, a miserable cabin is deemed good enough, though scarcely weather proof, certainly not fit to keep medical preparations in, and without a waiting room, or even a sheltered spot for the poor sick patient to sit down in, although he must in many instances have come on foot seven, eight, or nine miles, and may be heated and tired; having a similar journey still to be performed before he reaches home. It may well be questioned how far, under such circumstances, a dispensary may not be productive of injury rather than benefit to the sick poor.

The qualifications requisite to entitle a person to be elected a medical attendant to a dispensary are not defined by law: the Acts for establishing these charities contain no clauses relative to this important point; consequently, persons who have no diploma whatever, and who are, at best, but students, are found in charge of dispensaries, and have confided to them a large number of poor, who are unable to apply for advice to any other medical person. We are happy to be able to state that such cases are rare. In general the medical officers are Edinburgh physicians, members of the London College of Surgeons, &c.; and possess likewise a midwifery certificate from Dublin. Some few are licenciates of the Royal College of Surgeons, Ireland.

It might be considered essential that the medical officer should reside in his district, but this is not imperative, and examples of the contrary are too numerous. We do not so much mean to notice those where the salary is low and the district secluded and small; but those in which the medical officer is well paid, has a large district, and yet lives in a town several miles distant, where he keeps his dispensary drugs often placed promiscuously with his own, sees what poor he likes, and pursues his private practice, always professing to be ready, at any moment, to visit a poor sick patient in any part of a district, the nearest point of which is sometimes five or six miles off, and the most distant ten, fifteen, or twenty; thus undertaking to go twenty, thirty, or forty miles to make one visit. It is evident that this will be but seldom done. In some extreme cases, a poorly paid unqualified assistant resides on the spot.

It is very seldom, however, that there are assistants, although it appears to us that a dispensary can scarcely be so conducted as fairly to keep its register, and other documents to prove its utility and necessity, in the way most grand juries require, without one assistant; at least, if the principal medical officer is to have any time for private practice, which is necessary to eke out, in most instances, a very limited income. Besides, there should be always some one at the station to dispense the medicine, and to render instant assistance in case of accident, during the unavoidable absence of the chief medical officer.

At all rural dispensaries there is only one medical officer, and such is likewise the case in some towns; but in others they are numerous, having certain parts of the town allotted to each; or the arrangement is, that every medical man shall see at his own residence what pauper patients he chooses, and have his prescriptions made up at the dispensary where a paid apothecary is stationed expressly for that purpose.

The payment of the medical officers is derived from the general fund raised, as explained under the head of Accounts, and varies not only in amount, but also in other respects equally important for the interests of the charity. It frequently is, as it ought to be, fixed and certain; but it may be made to depend on the state of the funds, and to consist of the amount of whatever balance may remain, after all other expenses shall have been paid; a most objectionable plan, in our opinion, and leading directly to great mischief; or it may be partly fixed and

partly dependant on the number of domiciliary visits paid: a good plan in itself, but one which requires a complicated arrangement of tickets, to be carefully filed and counted by a vigilant committee at fixed periods; an advantage rarely to be calculated upon. Indeed, without regular superintendence, no plan can succeed; and the want of it is the chief source of many of the errors it has been our painful duty to record. Another, and certainly a very simple mode, is to pay the whole sum raised to an apothecary, and bargain that he shall provide medicine and attendance to all the sick poor of the district; a plan similar to that adopted by many parishes in England, but against which a strong and we think a very reasonable feeling generally prevails.

In large towns, where the medical men are numerous and the prospects of private practice good, gentlemen are found undertaking the dispensary duties without any salary; but a decided division of opinion exists amongst those best able to judge whether this is or is not a desirable plan, or ultimately tending to the general good.

The election of the medical officers rests entirely with the subscribers of not less than one guinea. The grand jury have nothing to do with it. In large towns, where the subscribers and medical men are both numerous, there is competition; diplomas and testimonials are required, and pains are taken to give great publicity to the elections; but in rural districts, where the charity mainly depends on one family, the appointment is of course virtually in the gift of that family, and as far as regards the law, any person may hold it.

Pharmacy.—The room in which the medicines are kept is generally the sole apartment belonging to the dispensary: in some cases sufficiently large, well aired, and commodious, but too frequently presenting the most slovenly appearance. Medicines were found spoiling in damp paper, or evaporating from unstopped bottles. Drugs of a powerful kind were seen in bottles not labelled, or, what is worse, with a wrong label. In more than one instance no measure, weight, or scale could be found on the premises.

In most places, dispensary medicines are kept distinct from the medical officer's private stock. Sometimes the dampness of the dispensary shop is urged as a reason for removing some drugs to the private house, or the plan may be to keep the medicine, private and public, in the same shop. In one instance, neither the dispensary drugs nor the bottles destined to contain them, could be pointed out s distinct from the private stock. In another, a large quantity of Glauber salts, and one or two other cheap medicines, were all that could be shown to justify a charge of 60*l.* per annum. In most places a good supply of medicine, from a well-known druggist, was seen at the time of our visit; but this by no means proves that the poor are fairly supplied with the more delicate varieties; for prescriptions are rarely entered, invoices frequently not forth-coming, private apothecary's shops kept, and no sufficient and effectual control exercised over an individual wishing to make an improper use of his appointment.

"At dispensaries medicine is always a very considerable item in the accounts, and it has been our anxious wish to ascertain how much a patient ought to cost in medicine, by taking the average resulting from the frequent calculation of what he actually does cost; but we have not been able to arrive at any very satisfactory conclusion. In a very few instances only could the requisite data be obtained, viz.:—the number attended, and the whole cost of medicine. The register, as explained under that head, is almost always defective, and the exact cost of medicine rendered difficult to be made out by the habit, which is too general, of having bills with neighbouring shopkeepers for such items as paper, string, whiskey, lard, turf, calico, &c.

"In some instances, however, we did obtain the requisite data with accuracy, and found that from 4d. to 6d. per head per annum only had been expended for this important article, and appeared to be sufficient.

"Instruments for the more important surgical operations are seldom met with at dispensaries, and still less frequently are the property of the charity. A stomach pump is however frequently provided from the public funds. All the surgeons have belonging to themselves the instruments necessary for the minor operations."

(To be continued.)

REPORT OF THE POOR LAW COMMITTEE.

(*Continued from p.* 251).

The following exposure of the Poor Law Commissioners interests every friend to the poor, and a vast proportion of medical

practitioners. It will correct many defects and abuses.

"The Poor Law Commissioners assert that a bargain has existed between the parish authorities and the resident practitioner, by which the former were supplied with medical attendance for the sick paupers, at a 'small fixed sum,' on 'condition' of the latter being allowed to charge distant parishes exhorbitantly and dishonestly for the relief afforded to extra parishioners.

"A more unfounded charge was, perhaps, hardly ever made by the organs of Government against an intelligent and useful portion of society. The Commissioners have attributed an evil, which inevitably resulted from the old parochial system, to these imaginary compacts and 'conditions.' It was impossible that attendance on non-parishioners could be contracted for under the former Poor Law; unless, indeed, all the parishes in the kingdom could have come to a mutual agreement. The laws of settlement were, therefore, the cause of this imperfection in the medical arrangements, which was as injurious to practitioners as to the rate payers.

"The Commissioners have apparently forgotten to notice the numerous cases in which medical men were defrauded of their just claims, by the refusal of the parish officers to discharge accounts incurred for attendance on extra-parishioners, for which they have given no *written* order; thus taking dishonourable advantage of the well-known readiness of our body to attend the wants of the poor, without any security for payment.

"Your Committee have received information from several practitioners that, 'in the great mrjority of instances,' their bills on distant parishes have, for the above reason, never been paid.

"The Commissioners designate these charges as being 'at the highest rates,' and speak of the 'profits' thus acquired by the attendant. If it be deemed necessary to refute a calumny which, until the Poor Law Commissioners had uttered it, had proceeded only from the *ignorant* or the *vulgar*, we should be disposed to inquire, By what authority do the Commissioners constitute themselves judges of the propriety of medical charges? On what pretext do they denominate the well-earned remuneration of professional men, their 'profits?'

"But supposing that, occasionally, a bill for attendance on an individual or a family has exceeded the amount of the parish contract, the presumption is, that in nine out of ten of such cases the error did not lie in the specific charges of the *bill*, but in the *contract*, which *professed* to supply all the poor of a parish with efficient medical attendance, for a sum below what would justly be charged for attendance on two or three individuals.

"As far as your Committee have received information, the charges for medical attendance, not provided for by contract, have been moderate and reasonable, generally much lower than the ordinary rate of professional remuneration.

"The assertion of the Commissioners that 'the distant parishes had no adequate protection against these charges' is totally destitute of foundation. *An able writer* thus states the case: 'If the general and total charge exceeded 20*l*., a power of appeal *existed*; if under, the refusal to pay would have prevented the surgeon from obtaining his demand, unless by an action, and not only would few surgeons be found to commence a suit for an unreasonable bill, but no jury would be found to give a verdict for one. And the Commissioners, while making such a declaration, must surely have known, that before the pauper was removed the medical charges must first have been attested and allowed by two magistrates.'

"It would thus be necessary, in order to complete the transactions described by the Commissioners, that in each case *two magistrates*, in addition to the *parish officers* and the *medical men*, should have been implicated in this unworthy collusion.

"But the Commissioners proceed by bringing yet more serious accusations against us, viz. that 'the inferior officers (of parishes) have been feed by the medical officers to search out and give information of cases' of illness occurring in non-parishioners, in order that they might have opportunities for making these disgraceful charges. It is a matter of extreme regret, though not of surprise, that in our body, as in every other class in the community, there are persons to be found destitute of right principles, and guilty of mal-practices, and it is therefore possible that, in rare and solitary instances, such cases as those, which the Commissioners have described, may have occurred. But what can be thought of the spirit and design of a report which brands the class of parochial surgeons generally with such practices; which avoids all notice of their laborious and ill-requited exertions; of the sacrifices of

time, of remedies, of health, and even of life, that have been made by the great body of the profession in behalf of the poor?

"Your Committee are obliged to come to the unwelcome conclusion that the Commissioners hoped by impugning the character of the professional body to reconcile the public to the unjust treatment which they have so arbitrarily inflicted upon it; *and, in many instances, the effect has been but too well calculated upon.*

"The Commissioners state that they have employed the Tender system as a check to the general expense of medical relief; and they further admit that 'to prevent undue charges, even under competition, they have adopted, as a rule, that the aggregate charges for medical relief, within the new unions, shall not exceed the aggregate of the former expenditure for medical relief in the separate parishes now included in the unions.'

"The sums ascertained by 'Tender,' and *the amounts of the old contracts*, are therefore avowedly the data which have guided them in determining the value of medical services. After what they have alleged, as the reason for the former low rate of medical contracts (viz. the existence of fraudulent conditions between the parish officers, and the medical practitioners) it is remarkable that they should have fixed upon these rates as the maxima of future charges. It is, therefore, plain that a just remuneration, proportioned to the cost of the supply, and to the fair claims of the profession, was never contemplated by the Commissioners.

"They have attempted to defend their practice of procuring students who have recently passed their final examinations, for those unions where the established practitioners could not be compelled to countenance the new regulations, by declaring their opinion that the education which these young men had just received was equivalent, in practical utility, to the knowledge resulting from long experience on the part of the older practitioners.

"Your Committee are here again obliged to express their surprise at such a conclusion, so contrary to universal opinion. Nor could it excite less astonishment to find that the Commissioners congratulated themselves on the 'credit' attached to holding a medical office under 'a Board of Guardians!!' The 'credit' of such an appointment may indeed be easily judged of from the circumstances attending it, which have been already described. With regard to the analogy which they have assumed between a medical parochial appointment and that to 'one of the chief medical institutions in the country,' it is sufficient to say that, besides the important differences which might readily be enumerated respecting the duties and advantages of the two offices, there is this primary one,—The election to the latter is in itself a mark of distinction, because it is the consequence of merit. The office gives dignity to the officer, who thereby acquires distinction and consequent advantages, whereas the *medical* parochial office, so long as it is obtained by pecuniary competition, must degrade the holder, even though many respectable men suffer themselves to impart to the office what the office can never return.

"In the Commissioners' report there occurs this remark,—'We may be sure that the medical practitioner will, in fixing upon his terms, do nothing which he considers will not, on the whole, be advantageous to his own profession.' The Commissioners have here, as well as on other occasions, endeavoured to cast solely on the medical officers of unions the discredit of the miserably low stipends awarded to them. We have only to reply, that were the system of Tender introduced into any other profession, the same injurious results would ensue; if even the office of Poor Law Commissioner were to be submitted to the same degradation, there would be found needy speculators, *not destitute of ability*, who would gladly, for a tenth part of the salaries, undertake its duties.

"The principle of pecuniary competition, when applied to intellectual and moral qualifications, is the worst that can be conceived; and the Commissioners, in defending its application to the medical duties, have acted in defiance of the plainest dictates of reason and humanity. The motives which could prompt them to assert, as they have done, that such a mode was calculated 'to secure the best treatment to the paupers,' are inexplicable.

"The terms 'fair and open,' which the defenders of this system have applied to the competition, will, on a moment's reflection, be seen to be entirely inappropriate. A fair and open competition assumes that the competing parties are placed in equally favourably positions; but in this matter, the circumstances of the parties are totally dissimilar,—the one has *much* to lose, the other to gain,

by the issue. Further, the real object in view is not the parochial appointment. If it were,—if the Commissioners honourably announced that they had no wish to interfere with the private resources of established practitioners, but that the young men sent down should be limited, as the house surgeons of hospitals are, to the duties of their offices, then the competition might wear a different aspect; but it is manifestly the field for private practice that tempts the aspirant; the parochial appointment is only the means by which he is enabled to enter it.

"The Commissioners are not ignorant of this peculiar feature in the case; their report says, 'among the inducements to accept these appointments, is the field they offer for obtaining reputation leading to *more profitable practice*.'

"The 'inducement' which is thus openly held out to adventurers, to compensate themselves for the inadequacy of their salaries by an encroachment on established practitioners, thows that they (the Commissioners) consider the emoluments of private medical practice as means which they have a right to make use of for the reduction of parochial expenditure.

"Whence, then, is this more profitable practice to be derived in a thinly peopled agricultural district? We answer—*solely* from the scanty means of livelihood, too frequently possessed by the established practitioner in such a district.

"The authorities possess sufficient power over a medical man in these circumstances, *by the threat of a competitor*, to force his acceptance of any terms, nay, even to perform his parochial duties gratuitously; and they have frequently exercised this power. Can any one assert that a competition, under such circumstances, is 'fair?'—Or that terms fixed by such a mode, are likely to afford an equitable remuneration?

"After the *open confession* made in the passage last quoted from their report, it is strange that the Commisioners should have stated on another occasion, that—'It is perfectly impracticable to scrutinize the motives of candidates for medical offices.'. Still more remarkable is it that in their report they profess to believe that, under these circumstances the candidates 'will consider the interests and advantages of their profession.

"Your Committee desire not to be misunderstood on this point. They are far from wishing to object to competition on proper grounds: they believe that every field for practice is open to the whole profession; and they are also agreed, that parochial appointments should be thrown open to all duly qualified practitioners; but the competition must not be one of pounds, shillings, and pence, but of knowledge, of skill, of humanity—the only competition that can be considered honourable to the profession, and desirable to the community.

"In judging of the intentions of the Poor Law Commissioners, much assistance will be afforded by a reference to some of the replies which they have made to the complaints of the profession.

"On one occasion the Commissioners assured the applicants, 'That the Boards of Guardians should not be prevented making as *many contracts* as they pleased with the medical men.'

"At another time they stated—'That they had no desire to interfere with, or direct, the contracts between the parish authorities and their medical attendants.' But when the Secretary of State, last year, inquired of them respecting medical relief, they replied to him that 'they took *particular* care to supply a sufficient number of medical men for attendance on the sick poor.'

"It is impossible to reconcile this last with the two previous statements; and each of them may be disproved by a reference to undoubted facts. It is highly desirable that those members of our profession, who have not been personally involved in the parochial arrangements, and who may have believed that the blame does not rest with the Commissioners, should be rightly informed on this point. In numerous instances the Commissioners have interfered to reduce the amount of contract, where the Boards of Guardians had happened to act with justice to the medical officers; whereas, in those cases where a judicious interference might have been useful in checking the more frequent dispositions of the local Boards to make as few contracts as possible, and to act with a short-sighted parsimony towards the profession, they (the Commissioners) have declined acting.

"A medical gentleman wrote to the Commissioners last year, representing, in forcible terms, the evil of employing young and inexperienced strangers for the medical care of paupers. In reply, the Commissioners defend this practice by reminding him 'that duly certificated medical men, though young, are engaged to attend upon seamen and soldiers in the army and navy.'

"The difference, however, between an army and navy appointment and a parochial appointment is clear to the most superficial observer. In the former, the young man is first made 'assistant surgeon,' and is, for some time, under the controul of the full surgeon; in the army especially, every medical officer is responsible and subordinate to the army medical board; and he is, in some degree, limited to certain branches of practice.

"In the parochial office, on the other hand, the young man is under no professional controul; he has the sole and the irresponsible charge of the most important cases in every branch of practice, even in midwifery, where considerable experience is absolutely necessary; he has not even the advantage of consultation with his older medical brethren; and he need satisfy no one as to his professional competency, and his correctness of practice, but a Board of Guardians!

"On another occasion, in a reply to a complaint of the inadequate remuneration afforded, they stated—'That where the new medical appointments had been made, and regulations for medical relief had been brought into operation, the standard of medical remuneration has been raised, compared with that given previously in the separate parishes under the old system.'

"If by the 'standard of medical remuneration' they mean its actual amount, the facts in almost every union, as well as their own statements in other documents, completely disprove this assertion; and even, if they mean that considering the reduction of pauperism since the introduction of the new Law, the amount of present salaries affords a better remuneration for the duty performed, than the former salaries did, they are still in error; for, owing to circumstances to which your Committee have alluded, the number of those who receive medical relief has not diminished so fast as the number of recipients of general relief; and from the inconvenient regulations at present in force, and the additional duties imposed, the labour of the medical attendant is very much increased, in proportion to the number of his pauper patients. The salaries, therefore, afford a lower standard of remuneration than the former salaries, which were avowedly inadequate; to say nothing of the entire prohibition of specific charges which existed in various ways under the old system.

"From all these replies your Committee therefore conclude, that the Commissioners are satified with their medical regulations, and that they intend no alteration.

"It may, indeed, be said, that the following statement, made a short time since in the House of Commons, augurs favourably for some amendment:—'That in consequence of a late intimation from the Home Department, the Poor Law Commissioners were then consulting how the grievances complained of by medical men might be remedied.'

"Your Committee, however, have since had reason to believe, that the plan then under consideration was merely—*recommending the more general establishment of their, so called, 'medical clubs;'* and that it had nothing whatever to do with pauper contracts.

"The question now, therefore, arises—What is the proper course for medical men to pursue? It is manifest that, from the Poor Law Commissioners, nothing must be expected by way of voluntary concession. They neither listen to our representations, nor appreciate them. But from the Legislature it is reasonable to suppose that the subject will receive due attention, if we are in any measure unanimous in our proceedings and in our requests. Your Committee, therefore, earnestly recommend that immediate measures be taken for conveying the sentiments of the members of this Association to the Government or to Parliament.

"It is true that several impediments exist even in those quarters, to an impartial consideration of the subject. The Poor Law is, by the great majority of all parties, believed to be a wise, a beneficial, and a successful measure. The results, as to economy, are already sufficiently apparent; and the whole landed interest of the country is experiencing a considerable reduction of its burdens. Any interference with the details of this measure would beregarded with suspicion and dislike. The opposition of the medical men is liable to the imputation of factious and interested motives; and the power which the parochial authorities now possess over the profession will not be readily yielded.

"But these considerations, instead of damping our exertions, should excite us to more vigorous and determined efforts; no private interests, no unworthy fears, no unjust insinuations or attacks, should prevent our conscientiously pursuing that

course which the honour of our body, and the interests of science and humanity, plainly dictate. Your Committee think it right further to recommend, that application be made to the College of Physicians, the College of Surgeons, and the Society of Apothecaries, to adopt such measures as may seem to them best suited to further the objects we have in view.

"Should this Association, and the medical body in general, fail in obtaining redress from the Legislature, after well-considered and well-directed efforts, the alternative is open to us,—either to take a lower station in society, or firmly to decline any participation in the medical appointments of the new Poor Law: we may hope that the latter course will be extensively adopted. A broad line of distinction will then be drawn between those practitioners who are actuated by a high sense of honour and duty, and those who, from interested motives, would sacrifice the dignity and the usefulness of their avocation.

"Your Committee are led, by present occurrences, to regret the want of some general discipline, some presiding influence over the members of our profession; an influence which is exercised in every profession except the medical. It is true that a higher standard of qualification would ultimately accomplish the desired end; but in the mean time, something should be done to check the wretched spirit of rivalry and speculation, the under-bidding, and the jobbing, which unfortunately are but too frequently to be found among medical men.

"The prospect which the prosperity of this Association holds out, is almost the only one upon which we can at present look with satisfaction and hope. This Institution seems well suited to raise the tone of moral and professional feeling among medical men in the Provinces; and if, by means of it, more exalted principles, superior aims, and a firmer unity of purpose be infused throughout the great body of general practitoners, we may expect the best results to the interests of the profession, as well as to those of the community.

"But your Committee cannot omit some notice of the inconsiderate encouragement which a few of the Lecturers in the London Schools have given to these disreputable proceedings, by recommending their pupils to avail themselves of the openings afforded by the altered arrangements in parishes; and by supplying the Poor Law Commissioners with lists of names from which to select fit and pliant instruments for their purposes. The difficulty of making a successful stand against the oppression and degradation under which the medical body are now suffering, will hardly be wondered at, when it is remembered that we have influential traitors in our own camp.

"Your Committee trust that the injurious tendency of the existing regulations is becoming more apparent to those young men who, not content to commence their professional career in the paths which have long been trodden with advantage and improvement, by the most useful and honourable men in the medical profession, have preferred acquiring an unworthy distinction in the "wide fields (to use the Commissioners' own words) for the display of care and skill,' which they profess to have thrown open to them.

"The errors which occasionally have been committed, and the sufferings which they have unintentionally caused or aggravated, have shown many of these individuals that the experience thus obtained is painful; that their projects are likely to be unsuccessful, and that a professional character thus formed, is neither calculated to promote the science of medicine, nor to do justice to that portion of the community which may hereafter be intrusted to their charge.

"Your Committee firmly believe that the present mode of providing medical attendance for paupers, is exercising a most pernicious influence upon the character, the respectability, and the moral and professional capabilities of medical men; and that an improved system might do more than any thing else to raise the general practitioner from his present position.

"It may be expected that your Committee should be prepared with some definite plan for parochial attendance to submit to this anniversary meeting; but the difficulties which attend any specific proposition can only be judged of by those who have attentively considered the subject.

"Your Committee believe that, in the present state of the medical profession, and with the parochial authorities as at present constituted, no amelioration can be effected without the intervention of some third party. It will be readily granted that a fair remuneration ought to be given for the duties which professional men are called on to perform; the *amount*, however, of such remune-

ration should not be determined either by those who *pay*, or by those who *receive* it; nor should it be settled by these parties *jointly*, at *their own discretion, in every seperate locality.* To speak more plainly, the Commissioners and Guardians should not have the power of deciding what is a 'fair' remuneration, for they are interested in reducing it *below par;* on the other hand, the medical body should not have the power of fixing it, for they are interested in raising it *above par.* And further, the Guardians and the medical men of every separate union should not be allowed to arrange it at their pleasure; for (as it has been proved) the *former*, by requiring 'Tenders' from the *latter*, or by threatening the introduction of an adventurer, may, at any time, under present circumstances, reduce the remuneration to their own notions of adequacy. The rate of remuneration should, therefore, be fixed by Legislative Enactment. It should be sufficient in its details, or in the aggregate, to remunerate the medical officer reasonably and justly, for his time, his skill, and his expenses.

(To be Continued.)

SOLLY ON THE BRAIN.

(Continued from page 250.)

Our readers must have perceived from the extracts we have presented to them of Mr. Solly's work, the difficulty there would be in attempting an analytical review of it, which after all, would be using all the facts he has so industriously collected in the language of the reviewer. Most readers, we apprehend, would prefer the author's own language, because it enables them to form a more correct opinion of the merits of the work than an essay of it, however well written could do. This, in our opinion, is most fair to our readers and the author. Such are the reasons which induce us to allow the author to present himself to our readers, and to enable them to judge for themselves. In fine, the comparative anatomy of the brain is so little known to the great bulk of medical practitioners, that we think Mr. Solly entitled to no small share of praise for having arranged it in a clear and concise manner; and we deem it so instructive and interesting, that we have much pleasure in transferring it to our pages.

"The vital phenomena which living beings present to our observation are of two kinds.

"The one comprehends all those functions which tend to the maintenance and preservation of their individual existence and the reproduction of their species; while the other class of phenomena brings them into relation with the external world, informs them of the existence of surrounding objects, and, manifested in the activity of the intellectual faculties, teaches man in particular the properties of bodies and the laws which regulate them.

Those functions by which the nutrition and growth of individuals and the reproduction of species are effected, are common to all living beings, vegetables as well as animals, and there can be no life without them; but the second order of functions, the manifestation of which proves to us that the individual is capable of receiving impressions from external nature and of reacting upon these impressions, showing thereby a consciousness of their existence, is peculiar to animals.

"And all true physiologists, even from the time of Aristotle, have observed more or less accurately the distinction between these two classes of phenomena, and arranged them accordingly. Aristotle conceived that they might be classified under three heads, vital, natural, and animal; the first two comprehending those which we now combine under the head of vegetable life.

"Galen adopted the same arrangement, but added the hypothesis that these functions were superintended or controlled in their operation by presiding spirits; something in the same way that some physiologists of the present day believe in the existence of a single vital principle, whose office it is to effect all the various vital phenomena which are presented to our observation by living beings.

Bichat arranged the functions, like many of his predecessors, under two heads; but instead of referring the power, which appears to regulate and preside over these phenomena, to some mysterious spirit, he considered it to be dependent for its very existence on the nervous system; and this led him to divide the nervous material into two systems, the one of which he called the nervous system of organic, perhaps better called vegetative life, and the other of animal life.

"The first of these systems used in man to be designated the sympathetic nerve, from a belief that it arose from the brain in a similar manner to the cere-

bral nerves in general. Its title of sympathetic was owing to the idea that the sympathy which exists between all the vital organs was dependent for its existence on this nerve. The idea that it arises from the brain is erroneous; for it differs from the cerebral nerves as completely as the brain and spinal cord themselves do from the nerves which arise from them. And the notion being rejected, it has since been called the ganglionic system, a name which I think objectionable, in as much as it might lead the student to imagine that those nodules of neurine called ganglia were peculiar to this system, which as he advances in his studies he would find to be erroneous.

"It has appeared to me that in describing this portion of the nervous system in man, it would be better to designate it the Cyclo-ganglionic system, as corresponding in its mere anatomical arrangement with the nervous system of the cyclo-gangliated or molluscous division of the animal kingdom.

Some physiologists even of the present day are divided in opinion as to which of the two systems, the cyclo-ganglionic or the cerebro-spinal, the nervous apparatuses of the lower orders ought to be referred. Before the cyclo-ganglionic system had been acknowledged in man, and the lower animals as distinct from the cerebro-spinal system, every appearance of a nervous system was very naturally considered as corresponding to the cerebro-spinal.

"But after the cyclo-ganglionic system was admitted to be independent in its powers in man and the higher animals, physiologists, looking only to resemblance in outward appearance and not to analogy of function, began to maintain that the nervous system of the lower orders corresponded exactly to this, the system of vegetative life of the upper.

"It is now, however, generally believed that where a distinct nervous system is present, and there is an evident separation of the animal from the organic or vegetative functions, in all probability there are two corresponding nervous systems.

"And though it is difficult, most probably on account of its minuteness, in many of the lower animals to demonstrate the existence of the nervous system of vegetative life, as distinct from that of animal life, there is very little doubt that it always exists; and it has in fact lately been demonstrated in many of the lower orders, where its presence was not previously even suspected.

"Dr. Grant, in speaking of the nervous system, as developed generally in the animal kingdom, says, 'The nerves of sensation and motion closely accompany each other, forming by their union cords or columns, or a cerebro-spinal axis; but the sympathetic nerves, appropriated to the more slow and regular movements of organic life, form a more isolated system, and these three systems are developed together, almost from the lowest animals.'

"The following literary history, from Dr. Fletcher's Lectures, of the opinions held concerning the uses of the ganglionic nerves from Galen to Brachet is so excellent and comprehensive, that I think its introduction in this place will be acceptable to my readers. 'Before the time of Galen, the ganglionic system of nerves was entirely unknown; and, although by him and his followers, the Arabians, the existence of this system, as well as its supposed origin from the superior maxillary branch of the trigeminal nerve, was pointed out, as well as its other supposed origin from the abductor nerve was subsequently by Eustachius, it was not till the time of Willis that the ganglionic nerves were generally considered as a part of the nervous system at all.

"'Willis, however, still looked upon them as merely an appendage to the cerebro-spinal system, and represented them, both in verbal descriptions of them and in his curious diagrams of their distribution, as growing upon the latter 'ut frutex super alio frutice.' And this notion having been adopted by Vieussens (Neurograph, 1684), Lancisi (Opera Omnia, 1745), Meckel, senior (Memoires de Berlin, 1745), Zinn (Ditto, 1753), Hoare (De Ganglia Nervorum, 1772), Scarpa (De Nerv. Gangl. 1779), Monro (On the Structure and Function of Nervous Ganglia, 1783), Blumenbach (Inst. Physiol. 1786), Chaussier (Exposition, &c 1807), Le Gallois (Sur le Principe de la Vie, 1812), Beclard (El. d Anat. Gén. 1823), Wilson Philip (On the Vital Functions, 1817), Mason Good (On the Study of Medicine, 1825), and numerous other writers, both before and since the time that their independence was insisted on by Winslow, it has become a very prevalent custom to regard these nerves as of very secondary importance; and the names imposed upon the system in general, as well as the uses assigned to

it, have generally corresponded with this idea.

" ' The ganglions of the sympathetic nerve were supposed by Galen, their discoverer, to act as buttresses, in order to strengthen them as they recede from their reputed origin ;

" ' By Willis as a kind of diverticula to the animal spirits received from the brain, and also as a means of keeping up a sympathy between distant organs: Vieussens and Meckel adopted the same opinion.

" ' Lancisi looked upon them as forcing-pumps adapted to propel the animal spirits along the nerves

" ' The doctrine of the independence of the ganglionic system was espoused by Cuvier (Leçons d'Anat. Comp. 1799), and particularly insisted on, with his accustomed eloquence, by Bichat (Sur la Vie et la Mort, 1802), who represented all the ganglions of this system as ' des centres particuliers de vie organique, analogues au grand et unique centre de la vie animale qui est le cerveau ;' and who further demonstrated, not only that all these ganglions were collectively independent of the cerebro-spinal system, but that each ganglion was independent of every other; nay, that each nerve proceeding from such a ganglion was in a great measure independent of that ganglion, and even that each point of such nerve was independent of all the rest, and constituted, *per se*, a distinct focus of nervous influence.

" ' Richerand (Phys. 1804) and Gall (Anat. et Phys. du Syst. Nerv. 1810) adopted similar tenets ; and they are further inculcated by Wutzer (de Corp. Hum. Gangl. 1817) and Broussais (Jour. Univ. des Sc. 1818), the latter in particular describing the ganglionic system of nerves as possessing a peculiar kind of sensibility (*i. e.* irritability), with which it immediately endows all the organs destined for nutrition, secretion, and the other organic functions, and, by means of its repeated connexions with the cerebro-spinal system, all organs of the body.

" ' Brachet in an especial manner (Sur les Fonctions du Syst. Nerv. Gangl. 1823) distinctly represents the ganglionic system of nerves as the seat of ' imperceptible sensation,' and as presiding in an especial manner over the several viscera of the body.'*

" In the animal which we have last described, the Star-fish, it is evident that one of the earliest forms of nervous system which is cognisable to our senses, presides over the functions of animal life; and its nerves, like the spinal nerves in man, may most probably be divided into the two classes presiding over sensation and motion respectively, the motor nerves going to the arms, the sensory to the stomach. In this individual all the ganglia are of equal dimensions, none predominating in size over, or differing in function from, the rest : there is no concentration of power ; all is equally diffused.

" The nervous ring which we observe surrounding the œsophagus in the Star-fish, constitutes in the two next classes, namely, the *Articulata* and *Mollusca*, the most uniform and apparently the most important portion of their nervous systems. Every thing like further development appears in the first instance to be merely in correspondence with the general form and shape of the animal: thus, in the long-bodied insects, as the Caterpillars, Sandhoppers, &c., which consist of a succession of rings, we find the nervous system putting on the lengthened form ; while in the molluscous tribes, where external form appears, as it were, sacrificed to the advancement of their internal organization, all the ganglia are scattered about without much apparent regularity, though the whole still preserves a very obvious circular arrangement.

" In directing our attention to the relation which the development of the nervous system bears to the manifestations of consciousness in each individual of the animal kingdom, it is interesting to observe the relative position which the nervous system, in its simplest form, holds to the alimentary canal: we must not, however, attempt to account for this circumstance by supposing that the presence of a nervous system is necessary to the solution, digestion, and assimilation of the alimentary matter ; for these processes are perfectly executed by the fresh-water Polypus or *Hydra viridis*, in which there is not the slightest trace of a nervous system. Almost the whole existence of the lowest orders of animals appears devoted to the acquirement of food and the reproduction of their species ; apparently they answer no other end in creation than that of elaborating a nutrient material for others that hold a higher rank in the animal kingdom ; and the whole of their vital energies being devoted to this object, we cannot be sur

* Lecture xviii. Dr. Ryan's Journal, vol. vii. p. 360.

prised that those organs which are expressly constructed for its fulfilment should be surrounded by, and thus intimately connected with, that system (the *nervous*) by which the animal is informed of the existence of surrounding things, and is fitted to act upon these to the extent of its limited necessities.

"The next specimen of a nervous system to which we shall direct our attention is taken from the second subkingdom; the Diplo neurose or Articuculated animals of Cuvier. This is almost as simple in its arrangement as that just referred to, although in general appearance it approaches more nearly to that of the higher orders.

"Plate I. fig. 5, taken from Dr. Grant's Outlines of Comparative Anatomy, represents the nervous system of the common Sandhopper, or *Talitrus Locusta;* and it will be seen that here likewise all the ganglia are of equal size and nearly at equal distances: this form of nervous system is seen in the embryos of the higher orders of the Crustacea.

"The next step onwards in the evolution of the nervous system consists in the approach and close connexion of the two longitudinal cords and their accompanying ganglia, or to concentration of these into a single cord, as well as single ganglia. This form is beautifully illustrated by that of the Cymothea, Plate I fig. 6.

(*To be continued.*)

STATE OF THE MEDICAL SCHOOLS IN THE METROPOLIS.

THERE is not a single Medical School in the metropolis which has admitted its usual number of students during the present Medical Session. This may be accounted for, in some measure, by the fact, that a large number of pupils entered in the Session of 1834, to avoid the regulations issued by the Apothecaries Society at the end of the year. There is also another reason—the success of the Provincial Medical Schools.

ESTABLISHMENT OF AN EXAMINING OBSTETRIC BOARD AT THE ROYAL COLLEGE OF SURGEONS.

AN Obstetric Examining Board is about to be appointed by the Royal College of Surgeons. This has been done some years ago by the Dublin College. It is a melancholy fact, that some of the anile part of the council opposed this wise proceeding to the last moment, though every sensible man was of opinion that it ought to have been adopted half a century ago.

BOOKS FOR REVIEW.

The Economy of Health, or the Stream of Human Life from the Cradle to the Grave, with Reflections, Moral, Physical, and Philosophical, on the Septennial Phases of Human Existence. By James Johnson, M. D., Physician Extraordinary to the King. 8vo. pp. 220. London, 1836: Highley.

On the Disease of the Hip Joint, with plain and coloured Plates. By William Coulson, Consulting Surgeon to the London Lying-in Hospital, &c. 4to. pp. 112. Six plates. London, 1836: T. Hurst.

Guy's Hospital Reports, No. III., Sept. 1836. Edited by George H. Barlow, M. A., &c. and James P. Babington, M. A. London: Highley.

A Bedside Manual of Physical Diagnosis applied to Diseases of the Lungs, Pleura, Heart, large Vessels, Abdominal Viscera, and Uterus. By Charles Cowan, M. D. P. & E. 12mo. pp. 60. London, 1836; Sherwood and Co.

Manuale Pratico per la Cura degli apparentemente Morti pre messevi alcune idee generali di Polizia Medica, per la tutela della Vita negli Asfettici Opera. Di Pietro Manni, Cavaliere ordine di S. Giuseppe de Toscana, Professore di Ostetricia, &c. Napoli, 1835. 8vo. pp. 335, plates.

A very valuable work on Asphyxia, from the pen of one of the most distinguished Italian Professors.

De la Tumeur Blanche du Genou, et de la Maniere Specialement de la Guerir, par le Muriate de Baryte. Par Sirus Pirondi, M. D. Deuxieme Edition. Paris, 1836. *On White Swelling of the Knee, and its Cure by Muriate of Barytes.*

All communications, books for review, and advertisements, to be forwarded (postage free) to E. COX, Medical Bookseller and Publisher, St. Thomas's Street, Southwark; or to the EDITOR, 4, Great Queen Street, St. James's Park, Westminster Abbey.

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE XI.

Diagnosis in cases of arrest of Testis and Hernia—Injurious effects of the Taxis—Inguinal and scrotal Hernia—Operation.—

Let us now examine the circumstances which are similar in these two affections, arrest of the testis and hernia. Well, they occupy the same situations, they are both somewhat movable, they are both elastic, and they are both productive of occasional unaccountable uneasiness. If we consider them in a state of inflammation, the similarity will be further increased. Both will be more fixed, both will be painful to the touch, both will force the patient to his bed, both will excite fever, both will be attended by abdominal tenderness, sickness, vomiting, debility, thirst, and general restlessness, so that it is not difficult to conceive why a mistake may sometimes have occurred. Now we shall in a manner analyse these resemblances, and search for features of controul, by which these two affections may be distinguished from one another.

The presence of both testicles in the scrotum will at once tend to the certainty of hernia. The absence of one or of both will give rise to suspicion, that the testicle is concerned. The tumours which we thus compare differ in their forms and extent. The smaller testis is more circular than the hernia, it occupies a greater space, and swells to the surface with a flatter prominence. Both are elastic, but the elasticity of the former gives the idea of greater solidity. The sensations produced by manual examination of both will be found, on appeal to the patient, to differ most essentially. You have seen strangulated hernia handled with considerable roughness, and yet little pain has been experienced, nor has additional sickness or faintness been induced by this treatment. But things are not thus even in trifling inflammatory enlargements of the testis. The slightest pressure excites pain, and awakens the language of impatience. It instantly increases sickness of the stomach, and induces an overcoming, distressing languor, accompanied with colicky pains and annoying flatulence.

Having thus far endeavoured to put you in possession of knowledge of the several maladies of the chord and scrotum, with which hernia may be confounded, I propose to make a few observations with respect to the operation of the taxis as applicable to this form of the disease. We are seldom called on to apply its power, unless where the protrusion has descended into the scrotum. Except in cases of very ancient date, the tumour still preserves the oblique directions of the spermatic canal, in the course of which you will find a characteristic fulness that cannot be mistaken, when it has passed the external ring, it there deviates from the line of its former route and turns towards the testicle by rather a sharp inflection. Now it is on this pendulous part of the rupture the hands are commonly applied, and it is here the pressure of the taxis is immediately exercised. You at once perceive from what has been said in a former lecture, that such a case as this gives an opportunity of employing this agent under circumstances unusually advantageous. We have better command of the whole bulk. We can embrace it

more equally and perfectly, and we can change its direction so as to suit our views with more convenience than in any other variety of the disease, and hence it is, I presume, our efforts are more frequently successful than in other situations. You have been told that the recumbent posture is a necessary preparative to all that is to follow, as it diminishes the tension of the abdominal muscles; and you have been informed of the value of bespeaking their non-resistance by every means which can be suggested by ingenuity and experience. To insure these ends the shoulder and pelvis should be raised, and the thighs should be placed at an angle with the trunk. The position of the surgeon who aims at convenience is at the same side with the disease, although I know it may be sometimes changed to his advantage. As far as I am capable of judging from plain experience, I am sure it is desirable to examine the state of the tumour before any effort is made to effect a reduction of the protrusion. I am in the habit of devoting some short period to an inquiry which I hold to be material, I search for hardness, fulness, and resistance. If I detect any, I proceed without confidence of success, and I act with that cautionary circumspection, which gives a defiance from inquiry to all my proceedings. But, if there is nothing of that kind to forbid my efforts, I then cut in the manner I am about to describe. Regulated by a general rule previously laid down, I compress the tumour, I observe the effect produced upon the cervix of the swelling, and then I judge of the point when the obstacle to return seems to lie. If as I press the external mass, I find the tumour to swell in the course of the inguinal canal, I feel there is no obstruction at the external ring. If the swelling arising under my pressure be extended to the internal ring I conclude the obstacle opposing return, to lie there. If the fulness which thus arises be interrupted in an intermediate part, I attribute it to some action of the oblique or transverse muscles. At the same time I hold steadily in my mind, how these circumstances may be influenced by stricture of the neck of the sac, and by certain conditions of its contents. I know my last remark may at first view appear out of place, but when it is recollected, that we are often concerned in cases about the previous condition of which we cannot have any distinct or leading particulars, I expect it will not be considered an inopportune observation. Wherever I am thus induced to think the resistance to be, there I chiefly direct the means of taxis, and at that point I labour within the proper limits of its application upon these subjects, I cannot give further instruction. All beside must be learned from what you can see in the realities of practice, and must be gathered by yourselves in the field of experience. One or two cautions, however, I deem it necessary to give you. In all your attempts at reduction bring the pendulous tumour into the direction of its abdominal cervix, and next do not allow yourselves to be deceived when the hernia seems to undergo a diminution while acted on by your pressing grasp. I have many times known mistakes and disappointments upon this head, the former leading to a perseverance in means which ought to have been abandoned, and the latter to compulsory confessions, which are never creditable to a practitioner.

But now we are to undertake the operation, and for this purpose we must occupy ourselves for a short time in making preparation. The instruments required are few, and are easily got together. In fact, a well-furnished pocket-case contains all that an emergency can require. Provided with a keen scalpel, a lancet, a director, a forceps, a probe-pointed bitoury, needles, ligatures, and a few straps of adhesive plaster, a surgeon is sufficiently equipped for the contemplated undertaking. The hair being removed, you will dispose the patient so as to suit your best convenience. The accommodation which a hospital affords, you cannot expect to enjoy in the humble residences of those amongst whom your first professional duties may lie; so that you must have to calculate on difficulties here for which your education does not prepare you. I have operated while my patient lay on the floor of his miserable habitation; and in many instances, even in a better grade of life, a bed furnished the substitute for the operative table. Besides, you must learn to act independent of all that intelligent assistance with which we are surrounded in populous towns, and to go forward in your life-preserving course, where sympathy and ignorance combine to deprive you of the means of restraint so necessary to give precision and security to every motion of the knife. A night-call from town once placed me in the exigency of which I speak. The case had passed the

period in which taxis could be expected to succeed, and the time had fully come in which I dare not venture on the delay of an hour. A clergyman whose office brought him to the house, and a maid servant, were the only persons to whom I had to look for any assistance on the occasion. My instruments were placed within my reach, on a chair near the bedside; the patient was placed with the thighs separated by the bed post; in which situation the feet were secured by a bandage, and a candle being laid at either side, I was able to commence an embarrassing operation, and to bring it to an issue, which was happily successful. When, however, a proper table can be procured, the patient should be placed with his legs depending, but supported and slightly separated from each other. His shoulders being gently raised, and the body lightly or warmly covered, according to his option. The position chosen by the surgeon is not to be confined by rule. He will place himself to his best advantage; and he will change as circumstances appear to him to demand, and according to the suggestions of convenience. I have often passed from one side of the patient to the other in certain difficult points of operating, for the purpose of giving the fairest play to my own dexterity; and I have frequently returned, unaccommodated by the experiment, to the position in which in the first instance I stood. These observations might perhaps have been better annexed to my general instructions. But here they are not out of time; and by the present inculcation of them, a future repetition will be avoided. Hitherto all has been preparation; now, all is to be action. Rules applicable to all varieties of hernia have been detailed; rules particular must be advanced. If the general rules which have been delivered are sometimes mixed up with the particulars which are to be pronounced, you must attribute the occurrence to choice, and not to accident. To be succinctly clear is an excellence at which few teachers in our business have ever arrived; and I do not pretend to such an enviable eminence. You must allow me my own way. To be clear, I must be diffuse; for I never can be content until I see in you that assuring assent, which satisfies me that I have succeeded in bringing the subject of which I treat within the full compass of your comprehension.

Well, at length the knife is in your hand. Where is it to be laid on? In what manner is it to be used? and what is the degree of pressure with which it ought to be applied? These are certainly not altogether unimportant inquiries. The first question is more easily solved than complied with. I say, begin considerably above the point on which you have principally to act. This is a plain instruction. You would naturally suppose the authority delivering the precept always to act with the recollection of its value.

But, I must tell you, I have not done so; and I have frequently erred against a rule to which I more than solicit your adhesion. Was I to justify my omission by the number who partake of my fault, I can confidently say, mine would be the comfort arising from the participation of many. I have seen the inconvenience of a badly proportioned commencing incision—I have experienced more than its inconvenience, for delay has ensued, suffering has been repeated and prolonged. "Enlarge here, enlarge there—there is not space enough—get more room." This is the language often held in operation. This has not made me callous against what is to follow. When I receive this advice I act. It is my duty to remedy my deficiency, and I comply with a feeling for which I know no other name than self-rebuke. The same sounds fall on other ears. Obedience follows, because it is demanded. But I believe acquiescence in a necessary mandate meets with compliance amidst feelings keenly sensible of the consequences entailed by an omission, mistake, or neglect, a ground which experience, which is truth, commands me to caution you.

But all this admonition bears upon the parts with which you have been principally concerned, that is with the seat of stricture. Now we all know that this cannot in every case be determined. Yet I apprehend some certainty occasionlly exists, and that it is to be obtained by a careful observance of the seat of hardness, and of the point at which resistance is afforded to all efforts at reduction. I assume that to be a fact, which I believe; and, therefore, I say, the incision should commence at such a point as to afford all room which may be necessary to carry on our proceedings.

The incision may be commenced in two ways; either by using the knife as in most other cases of operation, or by raising the skin into a fold convenient for the completion of an opening adequate to expose a sufficient extent of the tumour. I never employed, nor have I seen em-

ployed the latter method. I object to it as the refuge of uncalled for timidity. I refuse it as insufficient for freedom of decision, and as entailing successive divisions of the integuments, by which, delay takes place, and renewed suffering is rendered unavoidable. These objections show you my reasons for giving a preference to the former method, by which I say danger cannot be incurred, if a proper estimate be formed of the depth of the integuments, and if the movement of the knife be governed by that degree of pressure which will insure the division of no more than the most superficial lamina of the fascia superficialis. If there be much adipose substance, it is to be divided by successive incisions through its most prominent part until we descend to the subsequent cellular substance. Through this easily yielding structure, the director is to be gently forced as high as the superior angle of the wound, and then the division of all that lies above it can be safely and rapidly accomplished. The parts towards the inferior angle are to be treated in a similar manner. When the patient is extremely lean, and the first incision at once exposes the laminated cellular coverings of the sac, I hold the guidance of the director to be indispensable to effect its exposure with readiness and security. Whenever the stricture of which I here speak, is in either way brought into view, every step we subsequently take must be managed with judicious caution. Mere bands which are sometimes found to cross the tumour and lamina, whatever be their extent, should be raised on the director preparatory to division of them, The proceeding is tedious, but it is safe and satisfactory. Through the firm lamina such an instrument can be passed with facility; through the more dense and resisting, it is necessary to make an opening to prepare for its admission into the cellular bed beneath. From what you have already heard and seen in former lectures, assisted by the array of instructive specimens laid before you, you must be assured that, it is impossible to calculate on the number of lamina it may be necessary to div de.

With respect to the sac, on which by these proceedings I may suppose we have arrived, I find nothing to subjoin to my general instructions; nor have I anything to add, with reference to its contents, so that I shall pass at once to the manner in which the stricture should be set free. Recollect, I treat of hernia of no extraordinary duration, and all things being now open and free for the purposes of examination, we are next to search for the seat of that opening by whose dilatation we hope to liberate the protusion, and then to give the patient the best chance of escape from impending danger. We pass the finger to the external ring, and we ascertain its condition; we find it tight—the nail can scarcely be insinuated beneath its border. The stricture is declared, and we have therefore only to consider the direction in which the necessary dilatation is to be effected. The means by which this step is to be accomplished has been already described, and every essential rule appertaining to its completion has been already delivered among my general instructions. There was but one matter then reserved, and that is the particular point to which your attention is now requested. It seems universally conceded, that the incision of dilatation should be made through the superior, or as it is often called the internal pillar of the ring, and in a line parallel with the linea alba. If the stricture be really at the external ring, and the hernia preserves the obliquity of the spermatic canal, the operation is wholly unaccompanied by any changes, and it may be readily effected. The opening involved in the incision is now prepared for your inspection. My assertion is thus confirmed, while additional assurance of its truth is offered by the numerous preparations within your reach. You see the whole hernial cervix lies between the knife and the spermatic chord, so that this part is not within range of risk. Here, you do not perceive any artery in immediate relation to the external ring, nor can any be connected with its border, so long as the hernia preserves its original obliquity; nay, I may go farther, for what I have before me will bear out the statement, that this obliquity may, in a great measure, be lost, without throwing any vessel into that distorted course which would expose it to the danger of division. Thus you become certain, there are no anatomical grounds for apprehension in this particular operation. The incision may be carried even far beyond the limits prescribed by the necessity of the case. You can also understand from what you have heard and seen, and from what is here again presented to you, that so far as the chord no epigastric vessel is concerned, the obliquely inward or outward direction are lines in which security attends the dilatation. As this is so, it may

be asked, why a preference shall be given to an incision in one course rather than in another. The reason becomes plain by a little reflection. If we slit open the defence which the tendon of this abdominal muscle gives to a naturally small boundary, we permanently increase that local debility. The separated fibres will never coalesce, and, consequently, a provision is thus established favourable to a future and farther development of the disease. The same objection, however, does not apply to an obliquely inward direction, nor indeed do I think any very good one can be found, if we are sure of the nature of the hernia. Perhaps the strongest rests on the fear of lessening the strength of the abdominal muscle in a part less dependant, and lower situated, than the line of now almost universal adoption.

Suppose the operation I have described to have been gone through, and stricture not to be found at the external ring, we know it can exist only in one or other of two situations, either in the neck of the sac, or in the internal ring. Now, while you remember we are treating a scrotal hernia of ordinary, that is, of oblique descent, you are also to recollect we are concerned with a disease whose history has been neglected, and whose nature must therefore to a certain extent be obscure. Obliteration of the neck of the sac may have been in progress, and now that the stricture is not at the external ring, I conceive it should be our business to ascertain the state of the peritonæum at the cervix of the tumour before we decide on any other operative measure. From the extensive pathological opportunity you have enjoyed on this subject, you see that narrowings of the protruded peritonæum are most commonly found to prevail at this aperture exposed to examination. A little above it, between it, or within its embrace, these contractions are met with. In a former lecture, I think I gave you a test by which the matter in question may be determined. When the parts which surround the neck of the sac are free from all participation in the existing restraint, the sac glides within certain limits in its encompassing bed of cellular substance. You have therefore only to hook your finger in the cyst, and draw it from the cavity of the abdomen; in this way it may be brought within the reach of operation. Should it, however, continue to hold a higher situation than is convenient for that purpose, the external ring must be dilated so far as is necessary to give room for the purpose held in view. In this preparatory proceeding, a director should be introduced immediately beneath the aponeurosis of the external abdominal muscle, and in the direction of the descent, as a guide to the bistoury or scalpel. When the aponeurosis is already exposed, I give a preference to the first instrument, by which it may be rapidly slit up; but when the integuments require further division, you will find it more convenient to employ the common knife, in the ordinary manner. Judging from my own experience, I venture to pronounce stricture of the internal ring to be a matter of exceedingly rare occurrence. When the boundaries of that aperture have any concern in strangulation, I believe they are never simply engaged. They are, as you have seen them to be, complicated with other parts, with which they are matted up by some obscure preceding inflammation, and in this way alone, do I conceive them to have any share in the disease. High authority, however, resting on observation, declared the possibility of such an occurrence, and of course you are to be prepared to treat it, when it arrives in practice. For, although I may entertain a suspicion that quoted instance or instances may be properly explained on the supposition of stricture of the cervix of the sac, I think it would be a defect in this discourse was I not to give you some rules for your conduct in even a possible case of emergency.

To explain myself upon this topic, let me say we have operated without a discovery of stricture, either at the external ring, or in the sac itself; we then look to the internal opening, and for this purpose it is plain the pillars of the external ring must be separated from each other, so far as to give convenience to what remains to be done. To effect this, we proceed in the manner lately laid down, until the finger is assured of the point to which inquiry is directed. Well, the stricture is thus ascertained. Now, how are we to act? The answer to this question is found by an inspection of this dissection, and of this hernial specimen. In both, the epigastric artery, the only vessel in any manner concerned, lies at the inner margin of the opening. In one, it runs its direct course. In the other, it winds in an arch round a portion of the sac. But, in neither case, can it be endangered by an incision of the superior border. This is the point for our dilatation. It is true, there would be equal

safety in dividing the external margin. But, inasmuch as certain complex cases, hereafter to be noticed, unless accurately distinguished one from the other, might lead to an injury of the vessel, whose source, situation, and depth, give it much importance, it is far better to confine the incision to the upper part of the circumference, where, if it be covered in a direction parallel to the linea alba, it can be always accomplished with security, not alone in cases which are simple, but even in those of the greatest degree of complexedness. Here is another view of the matter. The rupture may be a true bubonocele; it has not passed beyond the spermatic chord. In such a case, a different proceeding will be required. Now, we have nothing to do with the external ring. But we must cut down upon the internal one. The incision regulated by my former rules should be along the tumour. The aponeurosis of the external oblique is readily exposed. When denuded to a sufficient extent, a small opening is to be scratched through it, large enough to admit the director upon which it is to be divided to a proper degree of freedom. The flesh of the internal oblique is thus brought into view, thrown forward by the tumour which lies beneath. If a director can be insinuated under its border, much facility may be expected. In this attempt it is probable the transversalis will be raised in consequence of the intimate union which frequently exists between these muscles in this situation. Such an event is desirable, for now both muscles may be divided as far as is requisite, without any additional trouble. However, such an advantage may not be enjoyed, and then the fibres must be divided by repeated and cautious incisions, until the subjacent membrane is exposed to view; on which occasion, the director is to be employed on principles, it must be unnecessary now to particularise. The part thus first exposed, is not the sac. Interposed must lie the facial covering derived from the boundary of the internal ring, and somewhat lower down, some fibres of the cremaster muscle. In laying open this envelope, you are to observe the same precautions as when you deal with any other intimate covering of the peritonæum, that is, you prepare an aperture, and you use the director in a manner frequently specified. This and the former case are now, I may say, identified, and of course you cannot be astray as to the rules of practice. One additional observation, and this lecture is concluded. When we are disappointed in finding the stricture either at the external ring or in the neck of the sac, before we run into any further operation, experience suggests that we should well examine the condition of the peritonæum and its contents inferior to our incision. We may have made a wrong calculation as to the nature of the hernia. Its history being deficient, we perhaps proceeded upon appearances. I saw a case in point. The surgeon acted on the presumption of the disease being of recent formation. The misconception led him to look for stricture between his incisions and the abdomen. At length perceiving the tumour to hold an unaltered position in the sac, examination was thither directed. The inquiry led to the discovery of stricture inferior to the wound. The hernial sac was divided in a way designed to its destruction, and reduction was finally effected. I am quite aware of the value which students usually attach to unusual operations, and to extraordinary cases. You know my opinion as to the little advantage yielded by witnessing the one, and the still less instructive, which occurs to persons at your period of life, from listening to the other, yet I cannot withhold the following fact, which I give not so much from its rarity or usefulness, as because I think it a case not likely to escape your minds; and, therefore, that some matters of more general application may cling to it, and be thence effective in your practice. As I shall have occasion to mention the case more specially in treating of congenital hernia, I shall now only remark, that the testicle was an agent in the strangulation, and that when that body was pulled out of the way, the rupture was easily replaced.

APPLICATION OF PERCUSSION AND AUSCULTATION TO DISEASES OF THE HEART.

PATHOLOGY, SEMEIOLOGY, ETIOLOGY, DIAGNOSES, PROGNOSIS AND TREATMENT OF PERICARDITIS.

PERICARDITIS ACUTUS ET CHRONICUS.

Pericarditis was not known to our predecessors until the practice of making autopsic examinations became general, and its diagnosis may be considered as an acquirement of this age. That accurate observer, Laennec himself, declares that he never could recognise the signs of this disease during life, and if he some times supposed it to exist, it was more by

conjecturing its presence than concluding from its determined characters. M. Louis has studied the subject more recently and unveiled many of its mysteries.

Nevertheless, the signs mentioned by that accurate observer, as characteristic of pericarditis, are far from constantly accompanying this disease.

More certain signs have been lately remarked by Bouillaud in France, and Latham, Stokes, and Hope in England. M. Raciborski asserts that M. Bouillaud had recognised pericarditis by percussion and auscultation before he knew the observations of the English physicians, and there is no doubt that this was the fact. Before we can recognise the anatomical characters of pericarditis, we must examine the changes in the inflamed membrane, and those of the fluid which it secretes in a normal state.

The pericardium presents a great or less degree of capillary injection. In some cases the redness is scarcely perceptable or none, and in these death takes place with great rapidity. There is no doubt in such cases, that the redness and injection existed during life; but there was not time for the blood to be located in the inflamed tissue, in the same manner as we observe redness of the cheeks, and of conjunctiva entirely dissipated a few instants after death. It is also to be mentioned that when the redness and injection exist, they also occupy the cellular tissue subjacent to the serous membrane as well as this membrane itself.

The redness does not invariably arise from injection but sometimes from effusion or infiltration of a certain quantity of blood under the serous membrane or into its tissue. Then the redness appears in form of spots or patches, of greater or less extent. The membrane is here imbibed with blood. This is the case in hæmorrhagic pericarditis in which the parietes of the pericardium offer a real sanguineous imbibition.

The thickness, transparence, and consistence of the pericardium present, in general, no appreciable change. In some it appears a little thicker and less transparent than in health. When the effusion is very slight, the pericardium is less polished and less soft to the touch than in the normal state, and sometimes it is altogether dry, glossy, and as if gluey to the touch.

The pericardium is easily detached from the heart, and after its seperation, we find an injection and redness more or less marked and sometimes a sanguineous infiltration in the subjacent cellular tissue.

The pericardium is then more or less distended, according to the quantity of effused fluid, or matter.

The normal secreted fluid of the pericardium is modified in its quantity and quality by pericarditis. This enables us to distinguish pericarditis from hydropericardia, whether active or passive, for in the latter disease, the quality of the fluid is the same as the normal serosity or secretion. The pericarditic fluid, on the other hand, coagulates like blood, and divides into two parts, the one a fluid, more or less turbid and flocculent; the other a concrete fibrous matter, which is commonly designated pseudo-membrane, or false membrane, plastic, coagulable, and organizable lymph. The thin part may be serum or blood, and when the latter authors use the term, hemorrhagic pericarditis.

In some cases the concrete part or false membranes float in the serous or sero-purulent portion, and the equality of the effusion may be four pints (Louis) or two pints and a half of sero-purulent fluid (Corvisart.) At other times the effusion in place of consisting of two portions is a homogeneous liquid, inodorous white, creamy, greyish, or greenish, in a word it is true pus.

The quantity of the pseudo-membranous matter is very variable, it may amount to some drachms or ounces. It may be deposed in confused masses, or unite the layers of the pericardium, and the cardia-cone to the heart. The false membrane may be less than a line, or several lines in thickness. The disposition and configuration of the free surface of the false membrane in pericarditis is unequal, areolated, and was compared to the internal surface of the second stomach of a calf (bonnet du veau) by Corvisart. When the heart is entirely enveloped in rugous, irregular false membrane, it resembles a pine apple. The reticulated disposition resembles a honey comb; in other cases Dr. Hope has compared it to the appearances of the two surfaces separated from each other, being previously smeared with butter. The roughness and villosity of the surface of the pericardium has been compared to the tongue of a cat. M. Bouillaud seems disposed to ascribe the disposition of the surface of the false membrane to the continual movements of the heart.

The matter of the false membrane is of the consistence of coaguable lymph,

or the buffy coat of the blood, and its colour is a paler bluish white, or grey, and it forms adhesions almost instantaneously in moderate pericarditis, and unites the layers of the pericardium like the lips of a recent wound. M. Bouillaud is convinced that the inflammatory coat of the blood and the lymph effused by inflamed serous membranes, present the losest resemblance. "The adhesion of the inflammatory coat of the blood with the surface of the clot may be compared to the adhesion of the external surface of the false membrane with the free surface of the inflamed serous membrance, and the retraction of the crust produces an inversion of the borders of the clot, as the false membrane on the surface of a wound which suppurates, draws from the circumference towards the centre"

In chronic pericarditis, the pericardium is thickened and hypertrophied like all other tissues that are inflamed, and the subjacent capillary as well as the nutritive vessels become enlarged. There may be serosity or pus in the pericardium and the plastic matter is sometimes replaced by general or partial cellular adhesions, or by bands which unite the layers of the plricardium to each other, or to the heart. The false membranes are cellulo-fibrous, or fibrous, and are opaline whitish and milky, and may cover the heart and large vessels, especially the aorta near the pericardium. The false membranes may also become fibro-cartilaginous or osseous like the gelatiniform matter secreted by the inflamed periosteum. There are some cases in which the heart becomes covered with an osseous shell, and the pericardium may undergo all these morbid changes. This transformation is somewhat similar to the normal evolution in certain tissues as of the periosteum to cartilage and bone.

But in place of adhesions and false membranes, the pericardium sometimes presents granulations and small vegetations of different forms The effused fluid or the exsudation of very thick false membranes, sometimes makes a compression on the heart which causes its atrophy. M. Bouillaud has recorded cases, in which false membranes so compressed the heart as to reduce it to half its size, and in which it was found atrophied similar to a lung that had been a long time compressed by a pleuritic effusion. He also states that the internal membrane of the heart in the majority of the cases of pericarditis, was very much altered. It was some times red and thickened, the redness occupied the valves which were swollen, evidently thickened and fungous, and especially on their free border. At the same time clots of blood were observed, more or less abundant, some of which were evidently manifest before death.

In chronic pericarditis, there is nothing more common than to find in the internal sero-fibrous tissue of the heart, the same alterations as in the external sero-fibrous tissue.

The muscular tissue of the heart, may, like the serous, fibrous and cellular tissue of the same organ, become thickened and hypertrophied, and it must not be forgotten that it may be indurated, scirrhous, and cartilaginified. It may, however, become softened and more or less friable and changed in colour. Thus authors describe red and brown, yellow and white, ramollissement. Laennec observed that in chronic pericarditis, the muscular tissue of the heart sometimes became decoloured and whitish, as if it had been macerated for some days in water. This was caused, in the opinion of Bouillaud, in those cases, in which there was an effusion of pure serum alone, as in hydropericardia, properly so called. In such cases the surface of the heart is continually bathed and macerated in the effused fluid, it becomes whitish and acquires a pale or lactescent tint, which rarely extends to the muscular substance of the heart, it is arrested in the first layers, and sometimes, only occupies the serous and subjacent cellular tissue.

Symptoms and diagnosis of pericarditis in its period of congestion, secretion, or suppuration.—The local signs of pericarditis are of two orders; the first belongs to the physiological signs properly so called, as those furnished by the sensibility and movement; the second comprise the physical signs.

1. A pain more or less acute exists under the nipple and towards the inferior extremity of the sternum, occupying a part or the whole of the præcordial region and radiating towards the left axilla and arm, and extending towards the diaphragmatic, epigastric, and hyprogastric regions, and especially towards the left side. The pain may be pungent, lancinating, tearing, extremely violent, and like that of pleurisy is increased by percussion, by the respiratory movements and by cough; it prevents the patient from elevating the left side, or from lying upon it, and some patients place the hand upon the painful region during inspiration, or coughing.

There are, however, cases of pericarditis in which the pain is dull, or so slight that no complaint is made of it: percussion and pressure made from above, downwards towards the stomach, elicits this pain. Some patients do not complain of any pain. In cases in which the pericarditis is complicated with very acute pleuritis or severe acute articular rheumatism, the pain of pericarditis is often masked and obscured by that of either of the diseases just mentioned.

According to the observations of Bouillaud, the pain is very slight, or absent, in simple pericarditis; which accords with the conclusion of Laennec, contrary to that of Corvisart, that of all pericardites the most latent was that in which we cannot recognise any complication. Rheumatismal pericarditis is often idolent and attended with little pain, if pleurisy does not exist at the same time. In this last complication there is pain more especially when the left pleura is affected; and this is never so severe and pungent as when the pleurisy is situated in the left portion of the diaphragmatic pleura. The pain in pericarditis, like that of all tissues normally insensible, is caused by the reaction of inflammation on the vicinal nerves; and in this particular disease on the phrenic nerves, whose branches extend to the pericardium, and also on the intercostal nerves.

2. The pulsations of the heart are stronger and more frequent than normal, sometimes regular, irregular, unequal, and intermittent, and constituting palpitations more or less violent. These are distinguishable on placing the hand over the heart, and sometimes on inspection, while in other cases the hand does not detect them. The last phenomenon occurs when there is effusion into the pericardium; in which case the pulsations of the heart are more feeble than natural.

M. Bouillaud describes another phenomenon not noticed by any observer before him, that the second movement of the heart is made in two periods, and with a kind of crackling (craquement).

Lastly; M. Louis has noticed the projection of the precordial region in certain cases; an observation subsequently attested by Bouillaud in several cases.

Diagnosis.—When the pericardium does not contain fluid, the dull sound of the heart elicited by percussion, is nearly normal; but when the heart is increased in size by congestion, its sound takes a rapid extent, and the valvular bruits are heard *distinctly* and *superficially*.

This augmentation of volume may also supervene on endocarditis (inflammation of the lining membrane of the heart), and it is sometimes difficult to recognize this last disease from dry pericarditis with the same complication. It is fortunate that the mistake cannot be followed by dangerous consequences, as the two morbid states require the same treatment.

If the pericardium contains serosity, the dull sound will be proportional to the quantity of the fluid, and its rapid appearance enables us to distinguish it from the dull sound of hypertrophy of the heart.

When after having examined the precordial region during dorsal decubitus, or when the body is in the recumbent position, we can determine the superior and inferior level of the fluid; and if afterwards we place the patient in the sitting position, the levels are more or less depressed under the preceding points, which shows that the dulness does not altogether depend on simple augmentation of the size of the heart, caused by congestion. The position of the heart and of the fluid in the pericardium will vary, when the patient is placed on either side.

Auscultation affords many positive signs diagnostic of pericarditis.

When the pericardium is the seat of more or less effusion, besides the dull sound given by percussion, auscultation perceives the bruits of the heart *dull* and *distant*, and the impulsion is not audible. These characters are sometimes combined with the bruit de soufflet, resulting from the compression of the heart and its orifices by the effusion in the pericardium.

If the pericardium, instead of containing fluid, is covered with false membranes of greater or less thickness, the heart rubbing, during each systole, against the inequalities of these, will produce different bruits, frôlement (grazing), frottement (friction), souffle (bellows sound), scie (saw), râpe (rasp), and cuire neuf (new leather), all produced by the same mechanism, and presenting but different shades of friction.

The only one of these bruits characteristic of pericarditis, is the new leather sound, by Collin, the clinical assistant of Laennec, as all the rest are heard in different diseases of the heart. This sound, however, does not always exist in pericarditis, and is absent in many cases of the disease. (Bouillaud). Nevertheless, when these bruits are superficial, and appear to pass immediately under the ear, and chiefly during the approach of the

apex of the heart to the parietes of the chest, we presume that they are seated in the pericardium, and that there is pericarditis. Another distinctive character of the bruits is, that those of the valves and orifices are generally heard to a considerable extent, while those of the pericardium are only audible in the precordial region, while the valvular bruits are heard even under the left clavicle.

When pericarditis is acute, and the bruits instead of being *superficial* are *profound or deep*, and heard best at the orifices of the heart, it is probable that they depend on endocarditis, which gives rise to different diseases of the valves and orifices of the heart, and also explains the formation of the anormal bruits.

Lastly, there are other circumstances which assist in forming the diagnosis. Thus, when having heard the souffle in the dorsal decubitus or in the sitting posture, and when it disappears as soon as the patient lies on the right side, there will be strong reasons to believe that there are false membranes in the pericardium; that the bruit de souffle, which depends on the friction of the membranes, when the apex of the heart approaches the parietes of the chest has disappeared, because the latter was more distant from it in the new position.

M. Bouillaud has found a true bruit de soufflet in pericarditis, a sign also noticed by Hope, Stokes, and Latham, and without claiming any priority, he observed it, while he was unacquainted with their accounts of it. He also cautions the practitioner against confounding the bruit de soufflet, properly so called with the bruit de frôlement or de froissement which characterises certain species of pericarditis; the last is more diffuse and more superficial, is accompanied by a movement of grating (grattement) scraping, (râclement) or rasping, (râpement) which are not recognised in the true bruit de soufflet. Such is the difference between these bruits, and both may be present at the same time in the same patient.

The bruit de frolement pericarditique is analagous to the bruit of friction in pleurisy, was termed murmur accensionis et decensionis by Laennec, and on which M. Reynaud has offered some new details. He says, it is isochronous with the beatings of the heart, but is stronger during the systole than the diastole, and in certain cases exactly resembles the crackling of taffeta, bank note paper, or parchment. M. Bouillaud has heard it during the ventricular diastole only. The reciprocal friction of the opposite layers of the pericardium when covered with false membranes, is evidently the cause of the bruits of taffeta, parchment, and of the diffused and superficial grating or rasping just mentioned. Such is also the cause of the new leather sound, but the false membranes are thicker and more resistant than in the former case. Dr. Hope ascribes the bruit de soufflet to the increase of the force of the cardiac pulsations, while M. Bouillaud attributes it to endocarditis, either primary or secondary to pericarditis, and that there are cases in which it depends on the formation of clots in the cavities of the heart; productions so common in endocarditis, and which necessarily offer an obstacle to the course of the blood through the orifices of the heart. This cause therefore may be combined with the preceding one.

Symptoms. Pyrexia more or less violent, pulse frequent, full, strong, and regular, skin hot and sudoral; sometimes the pulse is small, unequal, irregular and very rapid, and the skin in place of being moist is very dry and hot, and in other cases it is cold on the extremities and covered with a cold perspiration. There is also dyspnœa and an insupportable sense of oppression, the patient being restless, constantly changing his position (jactitation) and calling for the admission of fresh air; the countenance is pale, sharpened, and marked with the greatest anxiety, and an expression of undefinable terror. Sometimes there are spasmodic or convulsive attacks, and even the sardonic grin. When the dyspnœa and nostrils are dilated during inspiration and expiration, and these functions become small and frequent as in pleurisy; respiration is interrupted by sighs, sobs and hiccups; there is in some cases a slight and momentary or a severe delirium, complete insomnolence, and sometimes general convulsions. The anxiety and agony are sometimes so great and insupportable, that the sufferers implore death to end their miseries.

When the disease continues for a few days, the countenance becomes deadly pale, livid, or violaceous; the extremities are infiltrated, and all the appearances of chronic diseases of the heart. There are some cases of intense pericarditis in which the symptoms and reaction scarcely exist; and this occurs when the patients agony is increased to this degree, they experience but a slight sense of oppression.

This great and singular difference is caused by the complication of violent pleurisy with pericarditis, and particularly of an extensive diaphragmatic pleurisy. (Bouillaud).

The dyspnœic phenomena almost extending to suffocation, and the lipothymic phenomena closely approaching to syncope, generally coincide with a considerable effusion into the pleura or pericardium, and with the formation of polypous concretions in the cavities of the heart.

The extension of the inflammation of the fleshy fibres of the heart, and the inflammatory swelling of the valves, which are much more frequent complications of pericarditis than were supposed to exist until a late period, very much influence the re-actional phenomena, and particularly the disturbance in the circulation and respiration.

The violent symptoms may be traced to the respiratory nerves, and belong to pleuritis or pleuro-pneumonia. In some cases there are vomitings, more or less frequent.

None of the symptoms now enumerated, when taken isolatedly, is diagnostic of pericarditis, and all of them must be taken together, as well as the signs furnished by inspection, the touch, percussion, and auscultation, to resolve the problem.

When most of the symptoms are absent, but there is fever, dulness of sound in the precordial region, with or without arching of this part, pericarditis is present. But when the disease is very slight, and scarcely any sign is afforded by percussion or auscultation, it is difficult to form a correct diagnosis.

It is also difficult to diagnosticate in pleurisy of the left side, near the region of the heart, but fortunately the treatment is similar in both cases.

In some cases, congestion and suppuration extend beyond their ordinary limits, and then some say that pericarditis has passed into the chronic state. But the chronic form of this disease is not always consecutive on the acute species. The term chronic pericarditis, is employed when the disease has advanced, from the first, slowly and obscurely, with little febrile action, and for this reason it is sometimes designated latent.

When the signs already enumerated, with those of effusion, are conjoined, with more or less pain in the precordial region, slight fever, increased towards evening, or after the ingestion of certain aliments, an oppression more or less intense, a degree of swelling of the countenance, with or without a violaceous tint, a general or partial infiltration, and œdema of the ancles, augmented when the patient sits up, we have certain signs of chronic pericarditis.

Signs of adhesions and other accidental productions consecutive on pericarditis.—M. Bouillaud informs us, that adhesions, milky spots and patches on the pericardium, caused by inflammation of that membrane, do not necessarily derange the action of the heart, and are met with in persons who enjoy the best health. This able pathologist had a patient affected with acute endo-pericarditis, with false membranes, which gave rise to a bruit de râpe (rasp sound), whose health was perfectly established. He does not as yet know any sign pathognomonic of the existence of false membranes.

When the patches and granulations developed on the surface of the pericardium, form projections of greater or less magnitude, and are hard, unequal, cartilaginous, calcareous, and even osseous, they give rise to different bruits of rude friction, sawing, rasping, &c. These productions are completely harmless, or, at least, do not considerably derange the function of circulation. But when they are situated within the cavity of the heart, as in chronic endocarditis, they produce great derangement of the function of the heart, and also many diseases, as will appear in the account of endocarditis.

Causes of pericarditis.—It is most important to know, that among the many exciting causes of pericarditis, the most powerful, and the most frequent, undoubtedly is the sudden application of cold, after the body has been very much heated, as after violent exercise. Among the causes are external violence, traumatic agents, blows, falls, and the introduction of foreign bodies into the pericardium. According to the numerous observations of M. Bouillaud, pericarditis was in the majority of instances, as well as all pectoral diseases, attributed to the sudden exposure to cold after a copious transpiration, or after severe exercise or fatigue. We are, therefore, not to be surprised, that pericarditis is usually complicated with pleurisy and peripneumonia, and also with acute articular rheumatism.

In some cases of rheumatism, a fever succeeds the acute inflammatory action, which has been termed essential by some writers, and which depends in a great number of instances on pericarditis, endocarditis, or endo-pericarditis. A latent

pleurisy likewise often causes essential fever after rheumatism, but this is of more rare occurrence than the diseases of the heart just mentioned.

Dr. Hope observes, in his valuable work on diseases of the heart, that in acute rheumatism there is not a more common or formidable danger than inflammation of the heart and its membranes, when neglected, and it often constitutes a most obscure and insidious disease, the patient almost always dies of the first attack, or survives a short time, a martyr of an incurable organic affection of the heart.

According to M. Bouillaud, pericarditis is not so generally caused by metastasis or transportation of rheumatism from the joints to the covering of the heart, as is often supposed; for he has observed that it did not occur until several days after the commencement of articular inflammation. In many cases the pericarditis succeeds the rheumatism, but it may occur during the existence of this disease, as it does during pleurisy and pleuro-pneumonia, from the tendency to extension and diffusion which characterise rheumatismal inflammation, upon the influence of some accidental cause.

It is scarcely necessary to mention the analogy between the tissues of the pericardium, endo-cardium, and sero-fibrous structures of joints, and of serous membrane. In further illustration of this point, I may allude to the instructive paper, by the late Dr. M'Dowel, of Dublin, on peritonitis caused by metastasis of articular rheumatism.

The predisposing causes of pericarditis will occupy us only for a few moments. We observe this disease in subjects of all ages and both sexes: it occurs in all climates and in different seasons; nevertheless the patients from ten to thirty years of age, are more exposed to it than those of other ages, and it is more common in the periods of the year in which there are great vicissitudes from hot to cold, than in others, &c. It is also determined by M. Bouillaud, that certain persons are predisposed to diseases of the heart, and that this predisposition is hereditary.

Prognosis, mortality, progress, and duration of pericarditis, and its complications. Pericarditis is as already stated a most dangerous disease when over looked, mistaken, or mismanaged; and we often find traces of it as the various degenerescences in the bodies of persons destroyed by various other acute or chronic diseases. Pericarditis is the most frequent inflammation after pleuritis. Bouillaud contends that the generality of pericardites are curable, and the mortal cases are only exceptional, and his extraordinary success depended on copious depletions. The most violent cases of simple and complicated pericarditis, even when combined with intense endo-carditis pleurisy, or pleuro-pneumonia yielded to this remedy.

Many distinguished authors as Lancisi, Senac, Meckel, Morgagni, &c. have described adhension of the pericardium to the heart and the morbid results produced by it, such as palpitations, &c. It would also appear at first sight that an adhesion ought to impede the function of the diaphragm, and that the movements of this muscle ought to derange the systole and diastole of the heart. But M. Bouillaud has described such adhesions between the pericardium and heart, which did not cause palpitations or any impediment to circulation and respiration. He has not found such adhesions so common as those of the pleura, and this he accounts for, by referring it to the strong and constant movements which incessantly agitate the heart. But he also admits that the fibrous, cartilaginous, and osseous depositions on the pericardium may in some measure impede the motions of the heart.

Chronic pericarditis with purulent, sero-purulent, sero-sanguinolent and sero-pseudo-membranous depositions is a formidable disease, and one which in general defies therapeutic agents. We should therefore endeavour to discover the acute form of the disease and employ vigorous means for its subdual, before it assumes the formidable character now described.

The progress and duration of pericarditis will vary according to a great number of circumstances, as the cause which produced the disease, the age, temperament, state of simplicity, or of complication and treatment.

Some pericarditis progress with such rapidity that they destroy life in a few hours. M. Andral reports a case in which death happened in twenty-seven hours. The cases so rapidly mortal are complicated with violent pleurisy, acute endocarditis, &c.

When pericarditis is chronic it may persist for several months, while morbid changes which succeed it may continue for an indefinite period, without disturbing the health in a remarkable manner.

In most cases, acute pericarditis, when

vigorously treated, terminates successfully from the seventh to the fourteenth day; but there are some exceptions.

In fine, pericarditis is often complicated with either acute or chronic inflammation of the internal membrane of the heart, of the pleura, of the peritoneum, and of the synovial membranes of the articulations. M. Bouillaud describes a case of the disease with which there was inflammation and suppuration of the spleen, and diaphragmatic pleurisy of the left side. Corvisart had previously observed that acute pericarditis never occurred without complication.

Treatment.—Like all other inflammations, acute pericarditis requires general and local bleeding, repose, low diet, refrigerants, purgation, and counter-irritation. The urgency and danger of the disease demand free sanguine emissions from a large orifice in the vein, repeated several times in the space of three, four, or five days. It need scarcely be observed, that the depletions, both general and topical, ought to be proportioned to the intensity of the disease, to the age, strength, temperament, to the sex of the patient, to the complications, &c. As a general rule, in a patient in the prime of life, affected with intense pericarditis, three or four bleedings from the arm, always from a free orifice in the vein, carried to the extent of decidedly depressing the action of the heart, or to the approach of faintness, will, during the first three or four days, seconded by the application of from twenty to thirty leeches, or cupping reiterated two or three times, suffice to cure the disease.

"Few pericardites," says M. Bouillaud, "will resist this plan of treatment, if attacked in their commencement." But when the disease persists after the preceding plan of treatment, different revulsives, such as the application of warm turpentine, blisters, antimonial ointment, croton oil, moxas, setons, and mercurial frictions, are to be employed.

During the use of the preceding remedies, the diet should be the lowest possible, and warm baths may be employed, as they favour the action of the remedial agents.

When the pulsations of the heart become tumultuous, irregular, and pericarditis is protracted, and induces hypertrophy of the heart, hydriodate of potass, combined with digitalis, is a most valuable remedy. But when there is an abundant effusion, or false membranes, causing by their compression an atrophy of the heart, it will not be prudent to diminish its action further by digitalis, colchicum, &c.

In hydropericardia, or dropsy of the pericardium, in addition to the means already mentioned, the internal and external use of hydriodate of potass, or the proto-ioduret of mercury, will perhaps afford relief; but should the disease continue to advance, paracentesis, or tapping is indicated, an operation seldom performed, from the great difficulty, or almost impossibility of determining the existence of the fluid in the pericardium.

M. R.

NEPHRITIS.—INFLAMMATION OF THE KIDNEY.

Symptoms.—Pyrexia; pain in the region of the kidney; the pain extends along the course of the ureter, and is accompanied with numbness or so some other unpleasant sensation of the leg and thigh on the affected side; retraction of the testicle; nausea and vomiting; high-coloured, sometimes mucous or bloody urine; micturition; dysuria, with partial or total suppression of urine; the pulse is full, hard, and frequent at first, but becomes small as the disease advances. The pain is increased by motion, and sometimes by pressure, and especially on straightening or stretching the lower extremity on the affected side. Instinct directs the patient to avoid this, to incline to the affected side, and to bend the limb, thereby relaxing the muscles of the loins. Hence he lies on the affected side or back, and draws up one or both lower extremities.

It terminates in resolution; in abscess; or in gangrene; known by the ordinary symptoms that accompany these terminations of infiammation in other parts.

Causes.—The common causes of inflammation; acrid diuretics; calculi or gravel in the kidney sticking in the uriniferous tubes, uterus, or bladder; external injury; long-continued and violent exercise of the muscles of the back, as on horseback; collections of hardened fæces in tbe colon; retrocedent or atonic gout; violent exertions, strains, [diseases of the urethra, prostrate gland, bladder, and ureters].

Diagnosis.—*From lumbago.*—By the seat of the complaint, discovered upon pressure; by the pain following the course of the anterior crural nerve; by the dysuria and micturition; by the pain not being increased upon motion of the muscles.

[It may be confounded with inflammation or abscess of the psoas muscle, but in this disease relief is experienced by straightening of the limb, and pain, by bending it forwards, which does not happen in nephritis].

From gastritis.—By the seat of the pain, &c.—See symptoms of gastritis.

Prognosis.—*Favourable.*—Remission of pain, fever, and tension, followed by a very copious excretion of high-coloured, mucous, or purulent urine; universal equable perspiration; hæmaturia; if succeeded by a remission of symptoms; hæmorrhoids. [The prognosis is generally favourable in idiopathic nephritis before the fifth day].

Although nephritis frequently terminates in suppuration, the ulceration formed in the kidneys does not materially affect the health, and generally heals, unless there be a scirrhous or scrofulous diathesis.

Unfavourable.—Pale urine, secreted in small quantity; great micturition; dysuria; sudden sensation of pain, hiccup, delirium, cold extremities, severe rigors, and supervening hectic fever.

The kidney, like all other organs, sympathises with other parts, and when it is irritated or inflamed it deranges them—as the stomach, the brain, the bladder, the testes, the skin, the thoracic viscera, &c. It also happens that nephritis is unaccompanied by pain in the kidney, while the stomach, the brain, or the bladder, may exhibit all the signs of idiopathic disease, while the primary source of disease is the kidney. It is also a fact, that diseases of any of the abdominal viscera will derange the kidney, and it may become diseased by metastasis, and especially in gout and rheumatism.

The kidney is very rarely affected with acute inflammation, but is very liable to chronic degenerescences, and also to calcules, sand, and gravel.

Suppuration is always preceded by rigors, sometimes as violent as the cold fit of an ague, and the matter is discharged in one of these ways: 1. Through the pelvis of the kidney to the bladder and urethra. 2. Into the abdomen. 3. Externally. 4. Into the intestinal canal.

Acute nephritis, when idiopathic, generally terminates by resolution, and very rarely proves fatal. But when complicated with calculus in the ureter, bladder, or urethra, it generally destroys life.

Dr. Spillan mentioned to me a case of supposed lumbago of several weeks' duration, which was pronounced to be nephritis by Dr. Crampton of Dublin. On the following day the patient, on attempting to evacuate the bladder, passed a large quantity of pus from the urethra, and lost all his former symptoms. He completely recovered.

Many illustrative drawings of nephritis, caused by calculus in the kidney, impacted in different parts of one or both ureters, and enlarging these tubes to the size of small intestines, and of stone in the bladder; of its impaction in the neck of this organ, and in the urethra; and of stricture of urethra and prostate gland, will be found in the valuable production of Mr. Crosse, of Norwich, on Calculous Complaints. Stricture of the urethra and disease of the prostate gland, are among the most frequent causes of nephritis, in an acute, but especially in a chronic form. Inflammation of the kidney often excites gastritis, gastro-enteritis, or peritonitis, and both kidneys are affected; a complete suppression of urine takes place, which proves fatal in a few days, by inducing cerebral irritation, or congestion. Dr. Laing relates the history of a case in which there was suppression of urine for nine days without proving fatal. When suppression of urine occurs in typhus, the patient is seized with cerebral congestion, and after death a urinous odour was perceived in the brain.

Acute nephritis causes such slight derangement in most cases, that it is often overlooked; and hence it is allowed to pass into the chronic state, and a permanent change of function is established, which will produce lithic acid, or other deposits in some cases; an excessive secretion of urea in others; and in more diuresis or diabetes, or both. The facts are not appreciated, and in the treatment of these diseases, their inflammatory origin is too frequently forgotten.

Morbid Appearances.—On examining an inflamed kidney, we find it of a scarlet or crimson colour, sometimes enlarged, indurated, or infiltrated with pus. The ureters, in cases, participate in the disease, they are red, and their mucous membrane thickened, covered with pus, adherent, so that their canal may be obliterated in a certain point in any part of its course, above which the tube will be enlarged. This last appearance is often seen when a calculus is passing from the kidney to the bladder, and when it obstructs the ureter.

Chronic nephritis may exist independently of the acute form of the disease, and is often caused by gravel, or sabu-

lous matter in the kidney. The disease is generally designated gravel. The urine, after being voided, and on becoming cold, deposits, in a short time, a gravelly substance, more or less fine, hard, and resisting the pressure of the fingers, which is composed of uric acid with animal matter, or of oxalate or phosphate of lime. There are dull or acute pains, with a sense of heat and heaviness in the lumbar regions, and the urine is voided with more or less pain or difficulty. The digestive organs are deranged, there is acidity of the stomach, with flatulence, after any irregularity of diet, as the use of ascescent wines, or drinks, or fruits.

When the disease proves fatal, the morbid appearances are the same as in nephritis. A gravelly substance, similar to that in the urine, is diluted in the kidney, ureters, or bladder. The substance of the kidney is, in many cases, of a perfectly natural appearance.

When a calculus is passing from the kidney through the ureter, it often produces intense pain and spasm of the bowels, which in this case is termed nephritic colic, though at other times there is no pain or inconvenience. Nature, however, contrary to all human calculation, relieves the patient by expelling the calculus from the kidney through the ureter, bladder, and urethra. I have known such a passage of a calculus in the same individual several times, the size of a garden pea.

It generally happens that there are several small calculi in the same individual, and sooner or later one of these becomes impacted in the ureter, or in the neck of the bladder or urethra, and in the two last cases death will ensue unless the calculus is removed by the forceps or by incision. This complaint is very common in old gouty subjects The disease is sure to entail much severe suffering, and will often prove fatal. But when there is no mechanical cause the prognosis will be more favourable. Disorders of the kindney may be overcome if attacked with proper remedies before structural lesion takes place; but, should the kidney continue irritated, it may terminate in calculi, or in grey granulation, or other degenerescence of structure, as tuberculous or hydatic disease. The kidney may be transformed into a kind of sac, which may fill the abdomen, and which may contain a variable quantity of urine. A case of this kind was treated at St. John's Hospital, which was supposed to be ascites, tapping was performed; the abdomen again became tense, death took place, and on the autopsy the enlarged kidney nearly filled the abdominal cavity.

Dr. Bright described in his Medical Reports, 1827, an organic change in the kidney of many dropsical patients, consisting, when fully developed, of a deposition of a yellowish granular matter in its texture, which he invariably found accompanied with an albuminous state of the urine during life. He hazarded the opinion that there were three forms of this disease. In the first the kidney is soft and of a mottled yellow externally; the cortical part yellowish grey, and the tubular pale. In the second stage the cortical part was converted more or less into a granulated texture, with a copious white interstitial deposit; and in the third stage these granulations were increased, and were of a yellowish, red, or purplish colour, projecting externally so as to render the surface of the kidney rough, and producing a semi-cartilaginous hardness of the whole gland; the tubular portions being drawn towards the surface.

This disease was attended by pain across the loins and upper part of the abdomen, and by sickness and vomiting. During its progress there was a strong tendency to inflammation of the serous and mucous membranes, and to effusions of blood and serum in the brain. In a subsequent paper in Guy's Hospital Reports, 1836, the complications now mentioned are fully described as the following heads of cases attest. Albuminous urine —death with convulsion; kidneys degenerated—death with convulsion; and coma—kidneys granulated; abuminous urine of four or five years continuance—death with convulsion and apoplexy—kidneys degenerated; albuminous urine —death from peritonitis—kidneys diseased.

The specific gravity of the urine was very low, in conseqnence of a deficiency of urea and salts. Dr. Bright considered in his original work, that this organic change was secondary, induced by causes which acted through the medium of the stomach and skin. The great tendency to inflammation of other organs, led him to recommend blood-letting, cupping on the loins, to alleviate the local disease. He preferred the supertrate of potass, and employed all diuretics occasionally, except mercury. This pathology is now established. Drs. Christison and Gregory confirmed the accuracy of Dr. Bright's conclusion. They subsequently

published an account of eighty-seven cases treated in the Royal Infirmary of Edinburgh, which proved the connexion between organic renal disease and albuminous urine. The granular state of the kidney was observed in every case in which an autopsy was permitted. Dr. Gregory, however, established that dropsical effusion, was not an essential though a frequent symptom; for, out of eighty cases there were twenty-two in which it was absent.*

Dr. Osborne of Dublin, in his valuable work on dropsies, 1835, describes eighty-four cases with coaguable urine, and powerfully supports Dr. Bright's conclusions. In nine cases the autopsies presented disease of the kidneys, and the similarity of symptoms of causes and collateral circumstances proved the existence of the same disease. In numerous cases of dropsies connected with diseased liver, impediments of circulation or respiration or general debility, which terminated fatally, in which the urine was examined before death, and found not to coagulate, and the kidneys were found free from disease; ending fatally, but unconnected with dropsy, the kidneys were perfectly healthy and the urine did not coagulate. "In no one instance," says Dr. Osborne, "have I met with coagulable urine without diseased kidneys or healthy kidneys with coagulable urine."

It is worthy of notice, that Dr. Wells, and Dr. Blackall anticipated Dr. Bright. They give the histories of nine cases of dropsy with dissections, in which albuminous urine existed during life, and the kidneys were found diseased; but preconceived opinions on the nature of dropsy prevented these physicians from tracing the connexion. Dr. Darwall met with one case of dropsy accompanied with coagulable urine, in which the kidneys were perfectly sound. It is also urged that albumen exists in healthy urine of those in perfect health, after taking indigestible food, or using mercury, but if it exist in such circumstances it does not coagulate by heat. Mr. Hamilton has detected disease of the kidneys in anasarca consequent on scarlatina when the urine was coagulable.†

Dr. Osborne adduces many satisfactory reasons to prove that the most common cause of this disease of the kidney is a suppression of the healthy secretion of the skin effected by cold. In twenty-two out of thirty-six cases, the disease could be referred to suppressed perspiration. Whenever general perspiration came on spontaneously, or was induced by medicine, the cases always terminated favourably.

The next frequent cause is the abuse of diuretic drinks and medicines. Of thirty-six cases, ten occurred in confessed drinkers of ardent spirits." Dr. Osborne is entitled to the great merit of explaining the cause of this organic renal disease, and the rationale of a judicious and successful plan of treatment. He further informs us that "of the thirty-six patients, eighteen laboured under bronchitis in different degrees of intensity; eleven had gastroenteric inflammation, denoted by thirst, vomiting, or diarrhœa; and the two diseases were in six instances combined in the same individuals. Thus it appears, that nearly two-thirds of the entire number, laboured under inflammation of the mucous membranes."

Dr. Gregory mentions that diarrhœa and vomiting were amongst the most constant symptoms, in forty-six out of eight patients; but they existed "without any dinstinct signs of inflammatory action." *op. cit.*

Dr. Osborne clearly shews the close analogy between this organic renal disease and diabetes. Thus both are frequently caused by cold so applied as to check perspiration, the skin is dry in both, with a disordered secretion of urine; and in both the restoration of perspiration greatly contributes to the cure. But in diabetes the quantity of urine is greatly increased; for as the skin no longer perspires, and as the bowels are either constipated or not relaxed, the only exit for the superfluous secretion is through the kidneys.

But in the organic renal disease, neither the skin nor kidneys are outlets for the superfluous matter, for the skin no longer acts, and the urine, which is often scanty, is always deficient in solid matters (salts and urea), and the dropsical effusion into the cellular tissue or serous cavities is the result. When the mucous surfaces are irritated or inflamed, and cause catarrh or diarrhœa, and secrete freely, the superfluous fluid which in the normal state would have passed by the skin and kidneys, is in some degree evacuated from the system.

If these secretions from the mucous surfaces so constantly co-exist with renal

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* Edinburgh Med. and Surg. Journal, Vol. 37.

† Edinburgh Medical and Surgical Journal, Vol. 39.

disease, as shewn by Dr. Gregory and Dr. Osborne, are channels through which the superfluous excretions are evacuated, which naturally pass through the skin and kidneys, it follows that the restoration of the functions of the skin will be one of the best means of relieving the catarrh or diarrhœa; and the obstinacy of these symptoms to ordinary remedies during the existence of the primary renal disease, is at once explained.

Dr. Osborne has adapted his practice to this conclusion, and with complete success.

"When a patient was placed under my care, with general œdema, coagulable urine, and dry skin, I directed him to be kept in bed, in order to maintain warmth of the surface, which is usually disposed to be cold. It has happened frequently that, by external heat alone, an improvement both in the quantity and quality of the urine, and a material subsidence of the œdema, have taken place. The first medicine ordered was usually a purgative; and in the choice of this, in order to avoid ambiguity as to its mode of action, I abstained from the use of all those articles which are reputed diuretic; such as compound powder of jalap, or supertartrate of potash; and I generally employed the senna mixture. I then commenced a diaphoretic course, by administering foot baths, hip baths, or general baths; the last either of water or of vapour, according as they appeared to agree best with the individual case, at night at the hour of going to bed. The patient also took at night eight grains of pulv. jacob. ver. 4. of pulv. ipecac. c. opio, and ten grains of confect. aromat.

"The usual drink was barley-water. In case, however, of tendency to stupor, or headach, the Dover's powder was omitted, or given in smaller doses. In one case, in which no perspiration was produced by the above and other means, it followed the use of the following mixture: ℞. Aq. Acet. Ammon. ʒiv. Sulphur. Subl. ʒj. Vini Ipec. ʒj. Ext. Opii aq. gr. ij. Aquæ Fœnic. duc. Syrup. Sacch. empyreumat. utriusque ʒij., one ounce to be taken every hour.

"When the vapour bath was not attended by perspiration, from want of reaction on the part of the patient, he was directed to take, while in it, two drachms of the Tinct. Guaiaci Ammoniat; when, however (as sometimes happened), both vapour and water baths produced coldness of the extremities, they were discontinued.

"When there was a continued tendency to coldness of the surface, unaccompanied by feeble action of the heart, the diaphoretic preferred was Tinct. Guaiaci Ammoniat. ʒij. Sulphuris Loti ʒj. Mist. Camph. ʒj. Sp. Piment. ʒss., or the following: ℞. Carbon. Ammon. ʒss. Mist. Camph. ʒvj., an ounce to be taken every two hours. In connexion with these remedies, administered in the evening with a view to procure a perspiration during the hours of sleep, warm applications were kept up during the day, and frequently a succession of bags of hot salt was maintained, when the heat of the extremities could not be otherwise preserved. When perspiration was restored in one part of the body, as in the trunk, but not in the limbs, the latter were rubbed several times during the day with an infusion of two drachms of bruised mustard seeds in distilled vinegar, with naphtha, or some other suitable stimulating embrocation.

"Having never failed in removing this kind of general dropsy whenever the entire surface of the body was restored to a perspiring state, it is not surprising that I should bestow the utmost attention on this part of the treatment.

"Next in importance to the restoration of the function of the skin, and indeed in most cases expedient, as contributing to that great object, was bloodletting."

In some cases, cupping or leeching on the loins was employed, with vesication effected by means of lint moistened with tincture of lytta, and covered with oiled silk. This acts rapidly, was applied in rapid succession, and the vesication dressed with iodine ointment.

Whenever purgatives were necessary, they were administered in the morning, so as not to interfere with the diaphoretics. As relapses are caused by exposure to cold, flannel should be worn next the skin, and frictions and baths employed when the skin becomes dry. When circumstances permit, a residence in a warm climate is advisable.

Bandages should be applied to the legs during convalescence, and exercise should be carried to perspiration, when the strength allows it.

When the renal disease is complicated with other complaints additional remedies will be required.

In dry bronchitis, copaiba and tinc. cubeb. in small doses were beneficial, and when expectoration was copious for a long time, and impeded respiration, one grain

of acelate of lead, and a quarter of a grain of opium diminished the secretion and irritation.

Leeches to the larynx unloaded the bronchial tubes, and caused a cessation of cough and dyspeœa. Irritation of the stomach and bowels was relieved by leeches, warm applications, and a diet of rice and arrowroot.

Dysentry commencing by tenesmas and general excitement was most speedily relieved by an enema of four grains of nitrate of silver, and eight ounces of water followed in three hours by another of starch and laudanum.

When pericarditis was urgent, it was relieved by tartarized antimony accompanied with local and general bleeding.

In valvular disease of the heart a small quantity of tinc. digitalis, with carb. ammoniæ, camphor and Hoffman's liquor was followed by diminution of the heart's action, a sense of general relief and a refreshing sleep. In diseased aortic valves, a large issue over the region of the heart was most advantageous.

When ascites follows chronic peritonitis or indurated liver, and intractably remains after the general œdema is removed, Dr. Osborne recommends the following measures, which in his hands have rendered tapping seldom necessary. They may be continued when mercury and drastic purgatives are abortive, and the declining strength of the patient forbids such powerful remedies.

"These are the repeated application of leeches to the rectum, so as to unload the vessels of the vena portæ. The applications of various stimulants to the abdomen, as, 1st, an ointment composed of equal parts of iodine, mercurial, and cantharides ointments. 2dly. A paste formed of Spanish soap, spread upon linen, and sprinkled over with muriate of ammonia immediately before being applied; which, by the chemical decomposition that ensues, and the consequent gradual extrication of ammonia, produces heat and redness; 3dly. Sinapisms, suffered to remain till the pain becomes urgent. These have the advantage of healing with great rapidity. 4thly. Frictions of six or more drops of croton oil. These are, however, rather uncertain; in some individuals producing no effect, and in others followed by erysipelas, extending beyond the seat of application. 5thly. A mixture composed of one part of tincture of digitalis, and two of aquæ muriat calcis; a teaspoonful to be rubbed on the abdomen, morning and evening. This compound appears to excite the absorbents, and increases the discharge from the kidneys, but does not produce any sensible redness of the skin."

Tinnitus aurium, watchfulness, delirium, stupor, or headach, with increased heat of the head, are formidable symptoms, as death is frequently produced by a low form of arachnitis. Under such circumstances, Dr. Osborne recommends, besides bleeding from the temporal artery and by leeches, the free exhibition of calomel followed by brisk purgatives.

Nephritis may be followed by scirrhus or cancer of the kidney, and excite irritation or inflammation in the viscera of the head, chest, and abdomen, and produce marasmus and death.

A free use of carbonate of soda in barley water, or with tartaric acid as an effervescing draught, or in porter, will be used with advantage. I have used from four to eight drachms in one day in a severe case. When lithic acid is deposited in the urine, indicated by a red or brick-dust coloured sediment, the following mixture will be found an excellent corrective.

℞. Liquor calcis, ʒvijs; liquor potassæ, ʒijs—ij; magnesiæ calcin, ʒj; mellis, ʒj; olei menthæ pip. mv. Dosis coch. ampl. 3. 4ve in die.

When the phosphates are deposited, the mineral acids, as sulphuric, muriatic, and nitric, properly diluted, very suddenly prevent this deposit. This alternation of alkalies and acids is equally effectual in pyrosis, according as the ejected fluid is acid or alkaline.

Persons affected with lithic acid deposition, should live on vegetable food, as Magendie has shown that this acid is in proportion to the quantity of animal food taken, and the quantity of azote afforded by it.

When disease of the kidney or gravel is induced by the disappearance of eruptions, or the suppression of long established evacuations, as hemorrhage from the bowels, rectum (piles), stomach, lungs, or nose, counter-irritation should be employed to re-establish the former disease. Setons and issues are also useful in the region of the affected kidney.

Nephralgia, or neuralgia of the kidney, is a common disorder to sedentary persons. It may continue for months, or years, without any disorganization. In a late consultation with Dr. Elliotson, he mentioned a case of this kind which has continued for twenty-six years, and Mr.

Costello has also informed me of some others.

In nephralgia and gravel, exercise which throws the muscles of the back into action, as walking, riding on horseback, shuttlecock, battledoor, &c. &c. is beneficial.

Calculus in the bladder is now consigned to the surgeon, and relieved by the operations of lithototry and lithotomy. The urgent symptoms caused by it will require the same plan of treatment as in chronic nephritis or gravel.

In calculus of the kidney, nephrotomy was suggested, but it is never employed at present. In addition to the treatment of acute and chronic nephritis and other diseases of the kidney already described; it will be sometimes necessary in cases of gravel to employ leeching, fomentations, warm baths, mucilaginous drinks, enemata, mild or low diet, rest of body, and tranquillity of mind.

When a calculus is passing along the ureter, there will be an intense pain or colic, or a dull pain along the affected ureter and spermatic cord, on the same side, with retraction of the testicle.

In this case a full dose of morphia, or an opiate enema will often afford relief; the warm bath, with fomentations on the abdomen and loins; and if the nephritic pain or colic is violent, venesection, leeching, and counter-irritation are necessary. When these means fail, an opiate suppository often affords relief. The quantity ought not to exceed two grains of solid opium, repeated once or twice in twenty four hours, and its effects on the brain being at the same time carefully observed. I am much surprised at the quantity advised by Dr. Dewees in his Practice of Physic, 1833. "Six or eight grains, or even more, according to the emergency of the case, of powder opium should be made into the form of an elongated pill, with a rich mucilage of gum arabic, and be permitted to dry. When sufficiently hard, it should be forced beyond the sphincter ani into the rectum, and allowed to remain: this may be repeated once in four or five hours if necessary. I should fear to adopt this practice, for I have known a member of the legislature, who was poisoned by half the quantity, after one application. It is also well known, that a much less quantity of opium than a drachm of the tincture of that medicine mixed with starch, may induce narcotism and death. The late Baron Dupuytren was the first to establish this fact.

I am ready to admit that the urgency of pain justifies very large doses of sedatives, but great caution is required not to exceed a proper quantity. In my own practice I order thirty drops of common tincture, or of the sedative solution of opium, or an adequate proportion of morphia, with three ounces of thin starch mucilage as a clyster, and repeat it according to the urgency of symptoms.

Treatment.—*Indications.*—The same as in the other phlegmasiæ.

They are to be fulfilled by—

1. General and local blood-letting; the latter either by the use of cupping-glasses, or by the application of numerous leeches to the region of the kidney [or perinæum].

2. Oleaginous cathartics of castor oil, manna, or oil of almonds: frequent emollient clysters.

3. Mild diaphoretics, especially frequent and copious draughts of mucilaginous and diluent liquids, as barley-water, decoction of marsh-mallows, linseed-tea, with a little nitre, solution of acacia, or gum arabic.

4. Opiate clysters when the fever is somewhat abated and the pain excessive, [as starch and laudanum].

℞. Decocti hordei f. ℥vj;
Tincturæ opii f. ℥j;

Fiat enema.

5. The warm hip-bath, repeated according to the violence of the pain; and fomentations to the region of the kidney.

6. A decoction of the dried leaves of the amygdalus persica, the peach-tree, drunk in the quantity of a pint a day, has been found useful in this disease.

[Anodyne embrocations, as the camphorated oil and morphia applied over the region of the kidney when the acute symptoms have abated, may be tried with advantage. An issue or seton should be inserted in chronic cases. In dyspeptic subjects, assafœtida, æther, and opium, often afford relief. The alkalies, as soda, potass, and lime water, are useful, the urine contains lithic acid; and the mineral acids when the phosphates are deposited].

The treatment of nephritis differs very little from that of enteritis, with the exception of the use of blisters. These are generally considered as improper, because they frequently induce strangury, which mostly increases the inflammation of the kidney; but they have been applied with decided benefit in cases where the patients did not usually suffer from strangury.

[A table spoonful of olive oil in syrup has often relieved pain, according to Martinet. The uva ursi and pariera brava in decoction, in the proportion of an ounce of each to a quart of water, are often beneficial. Dose ʒj twice or thrice a day. Decoctions of linseed or flax seed, improperly called tea, may be used freely; for example, a pint or two every day. The balsam of copaiba is very beneficial when all signs of inflammation have disappeared.

℞. Olei olivæ ʒss;
Lympi simplicis ʒj;
Fiat haustus tertia hora sumendus].

M. R.

New Treatment of Malignant Diseases, and Cancer, without Incision. By A. M. Bureaud Riofrey, M.D. 8vo. pp. 78. London 1386. Longman and Co.

THERE are no diseases which have so completely baffled the ingenuity of pathologists and the skill of surgeons as the malignant class, which as yet continue among the opprobria medicorum. Every attempt to explain their nature and to alleviate and remove them by a less painful plan than incision is a great desideratum. The author of the work before us has the merit of introducing to the profession in this country a new method of treatment, and one, which if it succeed so well in the practice of others, as it has in his, will be a valuable addition to therapeutics. It has been tried in Paris with great success, and also in one of our own hospitals, St. Bartholemew's, under the observation of Mr. Lawrence. It must be admitted by all surgeons, that there can be no objection to the use of a new escharotic, when more efficient and productive of less pain than those in common use. Let us now attend to the motives which induced Dr. Bureaud to employ the new remedy, the paste of the chloride or chloruret of zinc.

"Since the commencement of my medical career, I have paid particular attention to cancerous diseases: it was not, therefore, without considerable interest that, in December, 1834, my notice was drawn to the newly discovered method of treating cancer by the chloride of zinc; although the animated debates of the Academy of Medicine, in Paris, were calculated to throw some doubt upon its ultimate utility. Entertaining, however, within myself, opinions that have since been realized, I determined in June last, to visit Paris, and make my own observations upon the effects of the newly discovered caustic. I had previously received Dr. Canquoin's published memoir, and finding its information very insufficient, I was more particularly induced to the course I pursued, by a communication from Dr. C., through the medium of a mutual friend, that I should be better satisfied by visiting his patients; I therefore left my own practice, in which I had several persons afflicted with cancers, and for whom my journey was not a little important.

"I had requested a young surgeon of my acquaintance to attend any patient who might, during my absence, require immediate care.

"On my return from Paris, I mentioned to Mr. Lawrence, the advantages that chloride of zinc possessed, and how far preferable its application was, in cancerous diseases, to any other caustic, when these diseases were to be cured by eschars. Mr. Lawrence kindly promised to entrust some patients at St. Bartholomew's Hospital to my care, and I have, in this memoir, stated two cases of persons whom I attended there. Mr. Lawrence has likewise, in his private practice, employed some of the paste which I prepared for him.

"After witnessing the happy consequences arising from the application of chloride of zinc, I could not possibly doubt its efficacy; but being desirous of introducing so valuable a remedy in England, and wishing it to become public, I was glad to give a specimen of its powers in one of the first hospitals in London.

"Whilst awaiting the result of the application on several patients, it came to my knowledge, that the young surgeon who had taken my place during my stay in Paris, to whom I had communicated the object of my journey, and on my return, imparted the result of my observations, had published his researches on a new method of curing the cancer.

"For the interest of science I rejoiced at this information; hoping also myself to acquire some new ideas on a subject which so deeply interested me: but I was not a little surprised to find these researches confined to the discovery of Dr. Canquoin's memoir, and to the translation of it! I must admit I was also somewhat disappointed at being deprived of the honour of first introducing the chloride of zinc into this country; and cannot avoid feeling, that however trifling the honour may be, yet that it is due to me alone. It certainly would have been

more prudent to have withheld all communication as to the object and result of my journey to Paris, until the publication of my memoir.

"I commenced applying the chloride of zinc at St Bartholomew's Hospital, early in September; and with my private patient's, immediately on my return from Paris. The time is undoubtedly short to bring a memoir before the public, and it was not my intention to have been so precipitate, but for the publication of the researches of the young surgeon I have before alluded to, in which no mention is made of the cases I had treated at St Bartholomew's Hospital, although I had shown them to him: but I can prove to those who may require facts, that I have since August last, made numerous applications of the chloride of zinc; and all have proved successful. I have not only seen the persons whose cases are mentioned in Dr. Canquoin's memoir; but many others cured by this mode of treatment. If any patients who have had the escharotic paste applied, still remain in St. Bartholomew's Hospital; I should wish every medical man to visit them.

"Dr. Canquoin has named the paste of chloride of zinc, phagedænic paste; but I prefer calling it escharotic, because this appellation seems to give a clearer idea of the effect produced by this valuable caustic. The word phagedænic is generally used for gnawing ulcerations that cannot easily be limited, whereas the effect of the paste of chloride of zinc is on the contrary limited, and this property is one of its chief merits; the name of escharotic therefore appeared more suitable.

"I have included in this memoir some observations on the action of the caustics generally employed, wishing to unite all the necessary elements for treating cancerous affections, by an *escharotic method*. I do not think that the chloride of zinc can suffice to effect a complete cure of every species of malignant disease. Each caustic possesses its distinct property of modifying the subjacent tissues, and all should be well studied and understood to be properly applied.

"This memoir merely contains the elements of a useful work, which yet remains to be written on the local action of caustics, as well as on their reflected action on the corresponding or sympathetic organs; for instance, arsenic does not act only on the local tissue, but extends to the principle of life.

"All concentrated acids are escharotic, but gold, argentum, mercury, iodine, chlorine, zinc, antimony, &c. have each a distinct and peculiar property of modifying the effects of the caustic that destroys the tissues, and must be severally employed or adapted to the various indications. The *escharotic method* does not therefore consist in the indiscriminate application of this agent, but in the *choice* and judicious employment of all the means sanctioned by experience; and for this reason I have brought all the caustics before the reader.

"Although it must be acknowledged that the discovery and use of the escharotic paste of chloride of zinc is one of the greatest improvements in the treatment and cure of cancers; yet to assert that *every* cancer may be cured merely by a caustic, would be to descend from the elevated and noble position of an honorable practitioner, to that of an untutored empiric.

"At a later period I shall give an ample development of the propositions sketched in this memoir, and shall be happy to communicate to my fellow practitioners any information they may require on the subject; and gratified if they transmit to me the result of the cases they meet with in their own practice"

Our author commences with a hypothesis as to the pathology of malignant diseases, which, though ingenious, does not appear to us more correct than its predecessors, and by no means satisfactory. Nevertheless Dr. Bureaud has as much right to entertain his own views as any other author, and these we shall place before our readers.

"Cancerous diseases have generally resisted the most energetic measures of medicine and surgery; and most medical men have deplored the inefficacy of art in diseases that seemed to be incurable. In cancerous affections there is something irreparable, which leaves the principle of life mortally wounded.

"Convinced of the great advantage to be derived from the study of etiology, as to the remedy to be employed, it will not, I hope, be considered irrelative, that I should offer some observations on the nature of cancerous tumours, previous to entering into what I have to state on the application of caustics and chloride of zinc.

"Formerly when cancer was considered as a devouring animal, it was natural to offer it nourishment; and when looked upon as a separate parasitical being, exist-

ing upon the vitals of its victim, poisons seemed properly applied for its destruction. But this theory has at length been banished. The researches of pathological anatomy render it no longer possible to believe in its existence as a separate and independent being.

"That cancers are, in the first instance, local, whether proceeding from a known irritation, or hidden or neglected cause, is an opinion borne out by that of many medical men, and in that light most cases of cancer must be considered, to justify the numerous operations that daily take place.

"If in answer to this observation it be said that surgical operations are performed without expecting a permanent cure, but with a view only to free the sufferer from deformities, or to prolong existence, I shall avoid all discussion, and merely reply, that according to this principle, the escarotic paste will have the same effect, and can be employed at least when the patients will not submit to a surgical operation.

"I am of opinion that cancer is dependent on an anomaly of nutrition, caused by an affection of the nervous extremities, and a want of equilibrium between the secretive and absorbent functions; or rather, it is the result of a *necrosis* of a nervous extremity. This statement requires some explanation.

"In my work on Physical Education, the fundamental proposition is, that *growth governs life;* the phenomenon of growth well considered in all its phases, may lead to valuable results on hypertrophy of the anormal tissues, particularly when it ceases to act, through the increase of the whole economy.

"During the first period of life, the body is in a state of habitual increase and improvement. If the growth of the organs be made without effort, if the human body acquires its development without accident, and without being arrested in its ascending course, this facility of growth preserves infancy, childhood, and manhood from numerous diseases. But, if any accident causes the animal sap to deviate from its natural course, the effort of growth may be drawn towards the affected organ.

"Man remains but a short time in that state of equilibrium in which he receives just sufficient materials to repair the general waste; and as in the first half of life the weak organs become the central point of fluxionary motion, and morbid phenomena, thus, also, in the second period, the organs that have suffered either in their primitive development, or through fatigue, accident, age, or malady, become the seat of disease.

"The ancients were convinced that every individual had a relative weakness in some organ. If this proposition be adopted at a certain age, when the body has completed its growth, if the same materials be introduced, with a less expenditure, there will be a superabundance of nutrition throughout the whole economy; the weak organ then becomes the centre of growth, and it is at this time of life that the diseases to which I allude are generally observed to assume a marked character of hyperthrophy, and the cure of them is considered more or less difficult according to the energy of the absorbent vessels, at that period less excited by muscular action.

"When man attains the age of fifty, he generally begins to enjoy himself; he has in youth and manhood obtained the means of rendering existence more agreeable; his physical activity decreases because he has less need of it; he ceases his most laborious occupations, and gives himself up to the pleasures of the table, thus wasting less, and acquiring more. From this mode of life result all hypertrophic diseases; obstruction of the viscera, piles, stone, gout, obesity, schirrus, &c.

"This disposition of the economy; these *super-floraisons*, are never so forcibly observed as in females, during what is termed, the critical age, between forty and fifty. Two organs seem particularly liable to the woful privilege of preserving that formative strength so remarkable in woman; and these organs are precisely those which, in their healthy state, fill most important functions.

"The womb, and the breast, from the time of puberty, to the critical age, have great vitality, and a productive, or secretive power. When the functions of these organs cease; when they may be said to exist no more for their appointed purpose, they are nevertheless during a certain period, the centre of a flowing and generative movement: and if these organs have suffered, or are too weak to act upon the nutritive fluids which abound, they become the seat of polypus, schirrus, and various malignant or cancerous excrescences.

"Man and woman have both a critical period to get over. At a certain age, they have a superabundance of the nutritive particles necessary to growth, that

give rise to numerous affections, among which are obstructions, polypus, schirrus, tumours, &c. &c.

"In both sexes towards this critical period there is a partial cessation of functionary action. In all the parts of the body there are nervous capillaries which *die*, like the small branches of trees that we see covered with moss and vegetation, and the leaves which turn yellow and fall, in autumn, for want of a due supply of sap and warmth.

"When the nervous influence ceases to reach a capillary extremity, either disorder exists in the functions of the arterial or nervous extremity, or the artery dies, and atrophy supervenes; or if it does not die, and continues to secrete nutritive particles, these particles which are not absorbed, are frequently the primitive cause of a tumour, or of an induration.

"The nervous influence of the brain vivifies and regulates all the functions of life. When that influence no longer exists, and the secretion continues in any part, there is then a production of mixed tissues; and it is observable, that in these anormal productions, as in all monstrosities, nature is guided by rule, even in the midst of disorder.

"In the nutritive particle that supports and increases the tumour, fibrous tissues stuck together, cartilaginous tissues adhering to cartilaginous tissues, form those white bands and membranes, that have exercised the sagacity of many celebrated physicians.

"When a schirrous tumour is cut away, there are found fibrous, cartilaginous, fat or bony tissues, so that tissues of the same nature are generally together, and become united to others by transitive shades. When the sanguine particle predominates, which is the case in some persons, sanguinary fungous excrescences, which grow with striking rapidity, are observed. The tissues which form the vessels, are reproduced like all the tissues of the economy; the nervous substance exists also in the particles of arterial blood which reaches the capillary extremities. The schirrous, cancerous, encephœloid, and sarcomatous tissues, are not foreign bodies, but a production analogous to the tissues of animal bodies, which are misplaced.

"Sufficient importance is not generally attached to the effects of the nervous action. It must be remembered that moral affections have the strongest influence in chronic diseases. In most cases, cancer and schirrous maladies have originated in moral affections.

"The celebrated Dessault observed, that the misfortunes, and terrible catastrophe of the French revolution, had considerably increased the number of cancerous diseases. History presents us with a frightful picture of the influence of moral affections in producing cancers. Napoleon, previous to his exile, enjoyed perfect health; he was strong and robust, and so indefatigable that the world could scarcely contain him: but when, at St. Helena, like a new Prometheus, he was chained to a rock, a prey to his grief, he nourished the cancer that was to lead him to his grave.

"What are the consequences of grief? The heart, the stomach, and the epigastric region are oppressed; all the tissues seem withered. Joy, on the contrary, dilates them; the heart then beats freely, and the whole body seems to expand. Sorrow produces general langour; the nervous extremities lose their influence on the capillary, sanguine, or lymphatic vessels; the motion of the fluids seem interrupted; the liver has but little secretion—sometimes indeed it has none, and this fact may account for the numerous concretions so common to hypocondriacs.

"The different maladies which may have existed for a certain time, are not also sufficiently attended to; cancerous diseases are too often considered as constitutional, when a more attentive inquiry would prove, that some cutaneous disease, or critical discharge, had been incautiously suppressed; the equilibrium of health had been destroyed, and a *metastasis* had thrown all the suppressed matter on the weaker organs, already predisposed to cancer. I do not hesitate affirming, that generally, cancerous diseases are produced by a *metastasis*, or grief, after which may be classed, contusions, or local irritations.

"As the various parts of the body are in connexion with each other, no organ can be deprived of its functions, without injuring the harmony of the economy. It is not then surprising, that an organ condemned injudiciously to inactivity, or *inertia*, becomes weak; this explains the frequency of Cancers on the breast in mothers, who do not nurse their children; of the womb in barren women, or those who live in a state of celibacy; and the number of cancerous diseases which are so common at that time of life, when the breast and womb cease their functions,

particularly when females do not follow a regimen, suited to this critical period."

The author's views of the treatment follow his pathology and differ little from those of his predecessors and contemporaries, with exception of the proposed new remedy.

"From these general considerations, arises the treatment of cancerous affections, which must be varied according to the period of the disease, according to the local irritation, the moral pains, and all the circumstances commemorative of previous maladies. At its commencement, it is possible to avoid the irritation or the central point of anormal formation, and prevent its fatal termination. When this happy result cannot be hoped for, and the anormal produce is compact; or, when it oppresses the neighbouring organs, it plays the part of Vanhelmont's thorn. If allowed to remain in the tissue, it becomes the central point of a fluxionary movement: later on, the local irritation propagates, and to make use of Mr. Travers' expression, is *reflected*, becomes constitutional, and produces what is termed a *diathesis*. In the constant succession of these anomalies, there is no retrocession, no delay, no cure, unless the principle of the evil be eradicated. But what is to be done when this cancerous thorn increases, and grows again after excision?

"As life cannot be restored to the *necrosis* of an extremity, the branch that supports the capillaries must be cut, and the gland of the breast treated as though it were the extremity of a gangrenous limb. The healthy parts must be acted on: if the induration be only the result of an inflammation, the usual antiphlogis-means will suffice; but when there is scirrhus, there is a *thorn;* when there is cancer, there is death, partial death in the tissues. If there be an ulceration, *pus* and *sanies;* if any particle of the corrupted matter which flows from those ulcerations, be absorbed, then there is absorption of animal poison, as in the bites of venemous reptiles, or in the wounds of dissecting instruments: the corrupted fluids are carried on by the circulation, infect the whole economy, and produce the cancerous *diathesis*.

"After the most suitable and energetic local means have been employed for the local disease, it is necessary to act on the constitution, and in some way change and correct *the morbid habits*, and endeavour to moderate the activity of nutrition, for nutrition has an active part in producing morbid tissues: *impura corpora quo magis nutriveris eo magis læ lædes* *. Thus local treatment must be employed for local disease, and general means used to work on the whole constitution. After having spoken of the means of treating these cancerous diseases locally, by topical applications, I shall hereafter state what means seem necessary to modify the constitution."

"*Of the Scirrhus.*—the scirrhus may be considered as the seed of the cancer; sometimes it remains in the economy without causing any pain; neither does it increase in size; sometimes a mere induration is mistaken for a scirrhus, and, with the aid of divers applications, is cured by absorption; at other times the scirrhus spreads round the adjacent parts, and presses on the organs essential to life, but more frequently becomes soft and ulcerated."

Dr. Bureaud offers a few remarks on scirrhus and cauterization, and then details the histories of some cases of malignant disease he saw treated by M. Canquoin, in Paris.

"In all cases when hardness appears in any of these places fatally disposed to cancer: when no doubt remains as to the nature of the induration; when schirrhus exists, and increases, and presents a progressive character: when it is fixed under the skin, and causes lancinating pains, whatever may be its species, no time should be lost in employing proper means to remove it.

"When the schirrhus becomes soft or ulcerated; when the ulceration is deep, and of an ashy colour; secretes a fetid and ichorus discharge, irritating the surrounding parts; when the edges are irregular, and turned down, and the pain is lancinating, whatever name may be given to *malignant diseases*, the point on which physicians and surgeons agree is, that the methods of treating the local cancer, which have proved successful, are excision and cauterization. There are instances where excision alone is possible, others in which cauterization is preferable.

"*Of Cauterization.*—Differently appreciated at various periods, cauterization was only employed on surfaces of small extent; it was besides necessary to discover the means of taking away the cancerous part, without too frequent applications.

"All practitioners had remarked, that at certain times, there were in cancerous

* Hipp.

diseases, a period when, to make use of Sir Benjamin Brodie's happy expression, the anormal tissues were surrounded by a *morbid atmosphere*, and it did not then suffice to take off the cancerous tissues, but all the surrounding ones must also be cut away or disinfected; and a therapeutic agent was to be sought for, that had the power of taking off all the cancerous part, and at the same time possessing the means of clearing the infection from the surrounding parts. These purposes seem most effectually attained by the employment of the chloride of zinc; an agent, I am happy in making known, as powerful in its operation and certain in its result.

"The caustics generally employed have only a superficial action, because they cannot be kept on, for any length of time, in a liquid state, and those used in powder, under the name of arsenic paste, are in many respects dangerous. Dr. Canquoin says, that among all the caustics chemistry has made known to us, a substance must be sought that can destroy the tissues with energy (acting with as little pain as possible) without the danger of venemous absorption, and which can be limited in its action to the surface, and to the depth required.

"All these advantages are offered by the chloride of zinc. 'I applied it,' says Dr. Canquoin, in his first report to the Academy of Medicine, in Paris, 'in the first instance, in powder, but it did not act sufficiently. I at last, however, succeeded in preparing it in an elastic paste, which does not become hard, nor fall in *deliquium*, nor lose any of its caustic properties by keeping. This paste applied to the skin, acts vigorously on the surface covered by it, to a depth proportioned to its strength and thickness, and with such precision, that between a surface of half a line and a surface of two inches, I can go over all the intermediate space.'

"I shall now give a few observations which I made, accompanied by Dr. Canquoin, when visiting his own patients, from which an idea may be formed of the power of the escharotic paste.

"Case 1. *Cancer of the Breast.*—Madame Delahaye, aged forty-three, living in Paris, menses irregular, scrofulous constitution, having already had several cutaneous diseases: seven years ago her infant sucked her breast so violently, that an irritation ensued; the breast became wrinkled, it seemed drawn and supported by strings: the pain was felt at the nipple. Nothing was seen for eight months, but at this time the glands became hard, they were distant from each other.

"In December, 1833, Mr. Jules Cloquet performed an operation, and the wound got well; but three months afterwards a fresh tumour appeared, and a second operation became necessary. When on the 4th of May, 1835, the escharotic paste was employed, there was a lump as large as an egg; it was adherent and cartillaginous. Three applications were made: the two first were preparations of the chloride of zinc: at the end of five weeks the wound, which was six inches in circumference, was in good healing condition. I saw the patient before I left Paris, the 16th June, 1835. I have not yet ascertained the concluding particulars of this case, but Dr. Giroux, assistant to Mr. J. Cloquet, under whose care the patient was, has promised to let me know the result.

"When I saw the patient, she was, in Mr. Canquoin's opinion, confined to her bed with a *sciatica*, but Messrs. Cloquet and Giroux thought it was a tumour weighing on the sciatic nerves. A case less favourable, either for excision, or cauterization, could not have been found. The patient had a lymphatic and scrofulous constitution; had undergone much mental suffering, and had been affected with herpetic diseases; there was, consequently, but little resource.

"Case 2. *Cancer of the Breast. Axillary Glands.*—Madame C. of Versailles, aged fifty; had an indurated gland in her breast for fifteen years; she felt drawing pains at the nipple; the pain continued as far as the arm-pit; the knotty parts were at the top of the left breast, and the pain was intolerable. Five years since, Dr. G. proposed excising the gland, but the patient declined the operation; the doctor then prescribed hemlock poultices, gelatinous baths, bladders or mercurial applications, neither of which had any good effect. Another physician being consulted, advised an operation, which the patient refused to submit to: leeches, linseed and hemlock poultices were applied, and one of the leech-bites became sore, and continued to suppurate for two years. A third physician was consulted, who advised *nothing*. Six months later, blood and matter issued from the wound. At the end of May, the patient consented to the application of caustics, and the chloride of zinc was applied twice. When I first saw the patient, all the tissues between the breast and the arm-pit were

taken off by an eschar, part of the pectoral muscle was clear and healthy. I afterwards saw the patient several times, the wound was healing rapidly, and I have since received intimation that her cure had been perfect; she was free from all pain, and had no fear of a relapse.

"All the glands had been detached, even under the arm-pits. I observed that atrophy had taken place in several vessels, but there had been no hæmorrhage, the paste had acted precisely as could be wished, for it had carried off the cellular tissue, and the glands of the arm-pit only; the sore was three inches wide, and eight inches long. I left this patient in excellent condition, with a conviction that she would do well, and the event has justified my opinion.

"Case 3. *Cancer on the left Breast, length ten inches.*—Mad. B. aged forty-five, living on a farm near Beauvais, had been ill for two years. One day a beggar came to the door, walked in, and seeing her alone, did not beg, but desired her to give him whatever she had in the house. The servants being out, Mad. B. submitted quietly, yet the beggar threatened to cut her throat: she was frightened, jumped on horseback, and hastened to her neighbours to seek assistance. Her servants arrived in time to catch the miscreant, and deliver him over to the hands of justice.

"Whether Mad. B. received a blow while running, or in her haste to get on horseback, or whether from the effect of fright, a few days after she felt lancinating pains in her breast, with hardness of many of the glands.

"Several applications were made; the first on the 29th of April. On the 15th of June, I saw the patient; nearly all the inferior part of the left breast had been taken off, and the sore was almost healed.

"Neither of these patients had that yellow complexion so often met with in persons affected with cancerous diseases; all the functions were regular; there were no constitutional symptoms, and however large the sores, they were in a fair way of being cured.

"Case 4. *Enormous Cancer of the Breast, ten inches long, and five inches wide.*—Mad. S. sixty-three years of age, a very stout person, eighteen years ago, felt a hard lump in her breast; leeches were applied, and vegetable poultices put on. Mad. S. then took mineral waters, and shower baths on her breast, but discontinued them, as they did not agree with her: she had had nearly two hundred leeches on: the pain increased so that she could scarcely move her arm on account of the swelling of the arm-pit; pain was felt in the breast; an operation advised, but the patient refused to submit to it.

"Mad. S. had had much sorrow; she said she felt more pain in her breast when anything occurred to distress her.

"Before the paste was applied, the breast was hard, cartilaginous, and the nipple withered. When I saw this patient, she had a great deal of fever, her complexion was yellow, and she had all the appearance of a *diathesis* or cancerous constitution. With these untoward symptoms, and considering she was sixty-three years of age, I did not think her recovery probable.

"Many more examples might be added of patients, who had been attended for cancers on the cheek, the lips, and the nostrils, whom I have seen *perfectly cured*, but I shall confine myself, to one or two observations on malignant disease, in cases, which have occasioned some publicity, the experiments having been made in St. Bartholomew's Hospital."

We now come to the cases treated in St. Bartholomew's Hospital, and these are worthy of attentive consideration.

"In the early part of August last, I mentioned to Mr. Lawrence, the celebrated surgeon, that there existed a caustic which could be applied when the patient refused to submit to an operation, and I am happy to offer a public testimony of my gratitude to that gentleman, for having kindly allowed me the opportunity of making known to the British nation, so valuable a remedy. Superior minds do not reject the advantages which science affords, because they are tendered by a foreigner. A physician, from the nature of his profession, is the friend of humanity: his proper place is the abode of suffering and grief, without national distinction; and it is one of the most pleasing reflections upon the advancement of intellect, that the spirit of animosity formerly existing between France and England, has given way to a noble and generous emulation.

"Case 5. — *Malignant disease of the under Lip.* The patient cauterized in St. Bartholomew's Hospital. Mr. Lawrence's Ward.

"Wm. Oliver was admitted into the hospital on the 4th September, and placed in Henry's Ward. This young man had an ulcer, extending over two-thirds of the under lip, from right to left, termi-

nating at the meeting of the great zigomatic with the orbicular of the lips: the ulceration was seated on a hard basis, which seemed to follow the direction of the orbicular muscle: this state of induration was more marked towards the commissure of the lips, and extended to the mucous membrane of the mouth, which was hard and schirrous: the surface of the sore was uneven; the edges turned over. According to the patient's account, his lips were chapped by the cold, and while in that state he frequently bit them. He went to an apothecary, who applied salve, and the sore got worse.

"When admitted into the hospital, an opening medicine was given, and plaster of caustic potass put on the sore.

"The 18th of September, twelve leeches were applied; pills

"On the 28th. pills of col. and cal.; sarsaparilla and a fresh application of potass, &c.; refreshing poultices; but, according to the statement of the patient, and the assistant, the sore remained nearly the same.

"On the 10th of October, I saw the patient, and applied the chloride of zinc. On the 11th I took off the dressing; there was a white eschar, well limited.

"The 12th. Soothing poultices.

"13th. The same.

"14th. The eschar began to separate.

"15th. The eschar came off; it was three lines deep, and an inch and a half long; there still remained a hardness near the commissure of the lips.

"20th. Another partial application was made, and some of the affected parts taken off; the patient suffered but little; the wound looked well, and improved rapidly; there remained however three indurated points, and it became doubtful whether or no the paste should be again resorted to; for it was to be feared, that the bottom lip might be deformed. Had I been enabled to choose my patients, I should probably have rejected this one; for when I examined his lip, I saw that the escharotic application was less indicated than in other cases, and that when the eschar came off, it would cause a deformity; besides which, it was impossible to be perfectly acquainted with the depth of the hardened tissue. This first attempt was merely made, to prove that the escharotic paste had a limited effect; and if it could have been applied on any part where taking off the dead flesh would not have caused a deformity, I should have wished the patient to have been cured with the paste alone, and have not the slightest doubt but the cure would have been complete. But however desirous one may feel to make known a new therapeutic, that which contributes most to the patient's good, must not be lost sight of; I therefore thought a suture might answer, after an incision, and I made no new application. The patient has been discharged.

"The case I have just mentioned, is not a failure: the first application I made was meant not only to free the patient from his ulceration, but to show the advantages that can be derived from the escharotic paste; the result has fully justified my expectations; and the practitioner can only employ, in any case, the remedy he judges suitable. The observations to be drawn from this case are, that the sore looked well after the eschar had come off; that the effect of the eschar was limited; that the patient might have been cured by this method alone, and that I only gave it up on his account. In short, if this escharotic was employed for cancers, either on the temple, the breast, the legs, and other parts of the body, it would be preferable to a surgical operation.

"Case 6. *Melanic Cancer on the right Leg, six Inches in length, four in breadth. Ulceration under the internal Malleolus.* —John Smith, thirty-eight years old, a journeyman carpenter, from Ramsgate, received several wounds in his right leg, under the internal *malleolus;* six years ago there was a black lump sticking to the skin. Six months since an excrescence appeared, underneath the malleolus, which soon became ulcerated. Several applications of caustic potass were made, without giving any favourable result.

"On the 20th of October he was admitted into St. Bartholomew's Hospital, in one of Mr. Lawrence's wards. This celebrated surgeon allowed me to make an application on the ulcerated part under the malleolus. The ulcerated excrescence was one line beyond the skin; scirrhous and melanic tissues were felt round it. The escharotic paste being applied, the following day the excrescence was quite circumscribed; a few days after it came off, and the sore looked well; but the paste had only been applied on part of the cancer; and although it was one of a very bad nature, I begged Mr. Lawrence to allow me to continue the caustic application on the whole part that was affected. Permission being granted,

on the 14th of November, in the presence of severol students, I applied the caustic to the tissues.

"On the 15th the preparation was removed, and the effect was a white eschar, very adherent.

"When I made this application, I was fully aware that the patient was by no means calculated to shew the advantage of the Escharotic paste, as *le Cancer Melané de la peau* on account of its regenerating properties, may, according to Alibert, be termed *Redivivus*. But what would have been done for the patient in question? An operation with the knife would have been performed, which would not have prevented the cancer growing again, as is often the case; but the escharotic paste might undoubtedly be applied, as its powers and capabilities are yet unknown.

"I am anxious to prevent objections being made, particularly those that might be caused by prejudice, and repeat that the patient had on his leg, what Alibert calls a *Carcine Melanée;* and Jurine of Geneva, termed *Anthracine:* above the internal malleolus of the right leg, there was a black stain surrounded on all sides by an increasing hardness. Under the malleolus, there was an ulceration, with fungous edges, three inches in circumference. I wish this fact to be clearly understood, lest at any future time, there might be a doubt respecting the nature of the case I have treated.

"16th. The white Eschar became rather yellow.

"17th. The same Eschar appeared isolated, and the line of separation visible.

"18th. The Eschar of the ulceration came away; that of the black stain began to get loose.

"19th. The Eschar became loose.

"20th. The Eschar was detached from the bottom; but it is remarkable that the Eschar had lost its whiteness, and the diseased tissue was distinctly visible.

"21st. Two-thirds of the eschar came off: the surrounding tissues less hard, and there was a slight suppuration.

"22nd. The eschar became detached; underneath the wound, there were apparently diseased and black tissues: towards the upper part of the leg there were also black tissues; diseased tissues: towards the lower part of the wound there were white tissues; the cellular tissue was schirrous: there were several indurations towards the centre; the *isthmus*, separating the two wounds, was hard, and required to be taken off by the caustic.

"A slight application of paste was made on the black tissue, which concealed the eschar; the patient felt less pain; the paste was modified, and no sedative potion was given.

"This partial application towards the superior part of the wound, had the same success as the preceding applications; the 2nd December, the wound was healing rapidly, but there remained an induration between the two wounds. I thought it advisable to take it off, and I made a new application. The patient had such confidence in the efficacy of the paste, being aware of its salutary effects that he begged the induration that remained might be removed.

"It must not be supposed, because I made several applications, that I had any doubt as to the treatment. The first day I saw the patient, I told Mr. Lawrence, publicly, my opinion was, that all the indurated part should be taken off; but Mr. Lawrence thought it prudent only to permit a partial application in the first instance, and consequently several applications were necessary: if the patient has not yet left the hospital, he will do so shortly.

"Case 7. *Ulceration of the Womb; cured by an Eschar.*—Mme. E. forty years of age, scrofulous constitution, subject to hysterical attacks, was married at twenty-six, her menses appeared at fourteen: she was several years without children, and she was so anxious to become a mother, that she consulted several surgeons on the probable cause of her barrenness, but receiving no satisfactory answer, she obtained access to a medical library, eagerly sought the desired information, and finding that sterility was sometimes owing to a membranous pellicule at the entrance of the uterus; she fancied this might be her own case; and she tried by all possible means to do away with this obstacle: the result was a violent hemorrage, the cause of which she carefully concealed; she soon recovered, but continued pale for a long time. Two months afterwards she was *enceinte:* she was twenty hours in labour, and suffered considerably; she nursed her infant, though her menses appeared regularly: shortly after, she was again in the family way; her accouchement was easy; she again tried to nurse her child, but was soon compelled to wean it.

"In May last she had a violent discharge of some sanguine fetid matter; she felt great pain in her limbs, in the groin, and stomach, and she grew thin.

I assured her that a complete exploration was unavoidable: she hesitated some time, but at length made up her mind. Through the speculum uteri I saw an ulceration of a bad nature, embracing the neck of the womb, and giving a fetid and corrosive discharge. I touched the neck of the womb, and it was very hard. I applied leeches on the uterus, and prescribed emollient injections: but finding the fever still continue, the general health decline, and a putrid discharge from the uterus, causing great irritation, I resolved to apply a slight portion of paste of chloride of zinc, the size and thickness of a shilling. I kept it on the neck of the womb with a pessary *à bilboquet* for five hours; when taken off, a white eschar covered the whole of the ulcerated part, there was no discharge, the action of the paste had been confined according to my wishes, and the pain was less acute than I had expected.

"I certainly could, with this patient, have applied nitrate acid of mercury: I had seen Lisfranc and Recamier use it, and had often applied it myself, but in giving the preference to the chloride of zinc, my object was, to correct the fetidity of the discharge, and to make only *one* application; and this would not have been sufficient with the nitrate acid of mercury. As soon as the chloride of zinc was taken off, injections, emollient poultices, and hip baths, were constantly employed. The fifth day the eschar began to separate; the secretion that still existed was of a different nature from the discharge previous to the application of the paste: it was neither fetid nor irritating. The sixth day the eschar came away, it was the size of a shilling but thicker; the wound looked healthy; the induration of the neck of the uterus was considerably diminished. I prescribed emollient injections, the wound healed, the discharge ceased, the fever was cured, and the pa tient recovered her embonpoint. This treatment lasted only two months.

"I must admit that I felt some hesitation in applying the chloride of zinc to the uterus: I feared an inflammation of the womb, or of the peritonœum, but neither of these accidents occurred.

"I saw Dr. C. apply the paste of chloride of zinc on a cancerous excrescence inside the mouth, and I naturally concluded it might be put on the uterus. During my late stay in Paris, I saw a young Italian who had consulted Dr. C. he proposed an application of chloride of zinc to the neck of the uterus, to which she then consented, but would not afterwards submit.

"What cause can there be for fear, when chloride of zinc is applied on a large extent of tissues; on the whole breast, for instance, without causing any accident; and there is no reason to suppose the uterus more tender than the breast.

"Owing to the use of the *speculum*, the diseases of the womb are fortunately within the reach of art. An ulceration of the womb can be cured by topical applications, nearly as well as an ulceration of the leg or arm; and I have no doubt but that the number of diseases of the womb, that generally prove so fatal, will be considerably diminished, if females submit in *time* to the necessary treatment; by which means the progress of the disease may be arrested.

"I could relate many cases of diseases of the uterus that have been successfully treated by caustics, nitrate acid of mercury, sulphate of copper, or by chloride of sodium, but as this might give umbrage to some patients, I must be silent, though for the benefit of science and humanity I should willingly make them known: but I shall make up for this deficiency, by mentioning cases of patients I saw in Mr. Lisfranc's hospital, in Paris, where cauterization was successfully employed in preventing cancerous diseases in the womb, and I have stated this particular case, because few women will submit to the excision of the womb, and would probably have less dread of the application of the paste."

Our readers will now form their own opinions on the value of the new remedy, and we shall introduce the mode of preperation of chloride of zinc in our next number.

PUBLIC MEDICAL REPORT IN IRELAND.

(Continued from page 279.)

IMPROVEMENT OF CHARITABLE INSTITUTIONS—HOSPITALS—LUNATIO ASYLUMS.

We now proceed to conclude the official Government Report of the Institutions for the relief of the poor in Ireland; and its importance has led us to insert it in full. Many reasons induced us to place it before our numerous readers. Among these is the conviction, that the more our readers know about the state of unfortunate Ireland, the sooner will the condition of her people be ameliorated, and the sooner will she obtain the glorious privileges of England, her happy and most influential sister. We are not wont to allude to

politics, for we duly appreciate the wise and admirable medical axiom, "avoid politics and political assemblies." But we wish that every British subject, nay, every human being should enjoy the unequalled privileges of the British Constitution. We ardently hope that the public charitable institutions in the sister country should be placed on the same foundation as those of enlightened and happy England, where religious bigotry, and sectarian contention, if not unknown, is generally repudiated.

The only hospital at Belfast is called the fever hospital, but it is in fact a general hospital, in which are certain fever wards, and to be received into which fever cases have the preference. It appears that the large and rapidly increasing population of Belfast required a general infirmary, and as there can be only one county general hospital, and as that one was at Lisburn, the only assistance the inhabitants of Belfast could receive from the county was in aid of a fever hospital, and for such an establishment a presentment is obtained; to the sum thus procurred, subscriptions, &c. are added, and a general infirmary thus supported. It is most important to remark that though there are always fever cases in the fever wards, and though the staircase is common to all the wards, fever has never been communicated to the general wards. It is indeed an admitted fact, that where space is allowed and ventilation is properly attended to, there is no danger in placing fever patients in the same wards with other patients of all descriptions. In other wards no distinction need be made relative to the supposed communicable or incommunicable nature of that disease, and hence there is no necessity for fever hospitals as distinct establishments. When there is an epidemic no building can be of adequate size, and if it were, it would be highly dangerous to all parties, both patients and attendants, to fill it with patients all suffering from the same malady. When there is no epidemic, one hospital may safely receive almost every variety of disease. At Londonderry the fever hospital consists of two wards, under the same roof and same management as the general hospital, but having a separate staircase. There were no fever patients in the fever wards at the time of our visit, and consequently they were of no use.

This is another reason why fever hospitals, as separate establishments perhaps, need not exist. These wards would be always used in a general hospital.

At Armagh, the Primate has erected, and maintains at his own private expense an excellent fever hospital, into which all fever cases occurring in the town are received. The being affected with fever is the only, but the full and sufficient title to admission. The greatest benefits have resulted from it. Fever has not spread in Armagh since the establishment of this hospital.

At Cavan there is a fever hospital capable of receiving 30 patients, but not half the number of beds were occupied at the time of our visit. There can be no doubt that it and the general hospital might be safely united. The medical charities at Ballinasloe exemplify the want of some more efficient system of superintendance. The fever hospital there is scarcely more than a name. Some addition to the funds which have been expended on it, and on the dispensary, would support a general hospital for that town.

In the county of the town and the town of Galway, an hospital exclusively for fever is *the only charity* for intern patients; and as the crowded state of its extremely poor population constantly presents fever cases, it always contains a great many patients. The income, however, is very limited, and nothing but the great exertions of one gentleman could have effected what has been and is being done. The wants of the town require a general hospital.

The corporate body, in whom, by law, the management of these charities is vested, meets at intervals to transact the necessary business; but as there is a great unwillingness on the part of non-professional men to *inspect* fever hospitals, all the internal system of management is left to the medical men; and the excellent state in which we found many of these charities is due to these gentleman.

There does not, however, as yet exist any system of management common to all these institutions, which, whilst it might insure, as far as may be, the best possible expenditure of funds, would afford at the same time, a means of fairly comparing together these charities, situated in different parts of the kingdom, and having probably local peculiarities.

Chapter IV.—District Lunatic Asylums.—These general observations are drawn up after a careful inspection of seven asylums, viz:—Belfast, Londonderry, Armagh, Ballinasloe, Limerick, Maryborough and Carlow, and with the greatest pleasure we feel it a duty to report, that, in our opinion, these establishments,

are in the most essential respects, well and ably conducted; they reflect great credit on all connected with them, and on the country whose generosity supplies the means of erecting and supporting them. In venturing, therefore, on the following remarks, we are actuated solely by an anxious desire to improve, if possible, these admirable institutions.

In adopting the plan observed in the previous Reports, the Acts of Parliament relative to these asylums are first noticed; they are four in number, viz:—1 and 2 Geo. IV. c. 33; 6 Geo. IV. c. 54; 7 Geo. IV. c. 14, and 1 Will. IV. c. 13. By them the Lord Lieutenant and Privy Council are empowered to cause to be erected a number of Lunatic Asylums, sufficient for *all* the lunatic poor of Ireland; no one to contain less than 50 or more than 150 lunatic poor, with the express exception of the Richmond, for which there is a special Act to enable it to receive as many as it can accommodate.

The Lord Lieutenant likewise appoints two classes of directors; 1st, directors resident in Dublin, in number not exceeding eight, for general control, and upon their suggestions and recommendations are framed rules and regulations; and, 2dly, directors or governors resident in the district of their respective asylums. Some of these latter reside so far from the asylum that there is an instance in which it was difficult to form a board, even at the very opening of an asylum.

There is no mention made relative to qualification or otherwise of the persons under whose care the lunatic patients are to be placed. Why no asylum should contain more than 150 lunatics, does not appear; that there should be some limit no one can doubt; but 300 or 400 may be advantageously placed in one building; in fact this restriction is not attended to. The Belfast and Limerick Asylums contain already more than 150 each, and are being enlarged. We were frequently informed that these asylums were intended for *curable* cases only; the Acts however expressly state that all are to be admitted; considerable discretion is, however, vested in the Lord Lieutenant by section 5, 1 & 2 Geo. IV. c. 33.

These asylums are all erected on much the same radiated plan, and are handsome stone buildings, only two stories in height. This is an arrangement very generally approved of; the cells, wards and corridors are airy and spacious, and the accommodation for the intended number of patients ample; but we could not but be surprised to observe alterations being made to gain additional accommodation in buildings so new as scarcely to be finished. This has arisen perhaps from a want of accurate returns of the number of insane in the district, or perhaps from the admission of a class of patients not originally contemplated, viz :—the incurables. How to dispose of the incurables has been a question of serious consideration in France, and M. Ferrus, M. D., of Paris, physician to the lunatic asylum at the Bicêtre, in an elaborate report to the French Academy of Medicine on the lunatic asylums of that country, has recommended the addition to the present buildings of distinct wards for incurables. This plan is being adopted at Belfast; it may not however be undesirable, in at least one instance, to erect a distinct asylum for incurables only, in a situation where land can be obtained on moderate terms, and the patients be enabled mainly to support themselves, by the cultivation of a farm. A building might be so contrived as easily to admit of enlargement, in case the plan proved advantageous.

Those asylums have for the most part been judiciously placed near some considerable town, on dry elevated land; at Ballinasloe however, such is not the case; the asylum there is in a low flat meadow, scarcely affording any descent for drainage.

The patients are all of one rank, and and are all supported at the public expense. They are classed according to the nature of their disease, the noisy with the noisy, the clean with the clean, &c. &c.

This classification might in some instances be more completely and carefully attended to, and the number in each class diminished; 15 or 20 are as many as ought to be placed in any one class. At meal times we have observed the patients uncomfortably crowded together, without any necessity, from want of space.

Employment is provided for many of the patients; but it appeared to us that more might be done in this respect, and a greater variety of inn-door occupations introduced; the conversion too of a few acres of land into nursery ground, or the cultivation of succession crops, would afford more and pleasanter work than the mere cultivation of potatoes and wheat, and might be equally profitable. Occupation is considered one of the chief means of cure in cases of insanity, and therefore demands the best attention.

The treatment of the patients appeared

to us mild, kind, and judicious; coercion and personal restraint as little resorted to as possible.

Though these asylums are for the pauper poor, yet certain guarantees and securities are required, such as it may not always be in the power of this class of patients to procure. The most pressing want, however, is increased accommodation; a long list of applicants is to be seen at many asylums, and as the more recent the case the greater the chance of cure; it is highly desirable that the incurables be removed, (especially if these buildings were not intended for them), and then the recent cases would be more frequently and immediately admitted. This subject we think most pressingly demands attention.

The name, age, residence, &c. of each patient is carefully registered, but to make this department complete, a full medical history of each case ought to be drawn up, with a statement of the treatment and result; such a document is kept, we believe, in every county asylum in England, under the joint care and responsibility of the physician and chief resident officer, who in them must be a medical man, and will afford data from which new and improved modes of practice may be safely deduced.

An annual statement of the proportion relieved, cured, and dead, bear to the whole number treated should accompany the statement of the actual numbers.

The physician is the sole medical officer attached to these asylums. He does not reside on the premises, but in the adjoining town; he attends at intervals; his duties and authority are not properly defined; at least a misunderstanding in this respect exists in some instances.

The principal resident officer, on whom the management of the patients chiefly depends, is styled the manager, and is *not a medical man.* With every disposition to concede all the credit that is due to these gentleman who at present occupy this, the most responsible and important post connected with these asylums, we are of opinion that the chief care and management of the patients ought not to be entrusted to persons who have not received a regular and full medical education. The having evinced talents, attention and good conduct as keepers, is, no doubt a very important recommendation, but nothing definite in this respect seems at present imperative; indeed, we are not aware what knowledge or experience is deemed necessary to qualify a person for the office of manager.

That medical men of character and of sufficient standing in their profession, willing to devote themselves to the office in question, are to be found, cannot be doubted. In England the chief resident officer must be a member of the London College of Surgeons. The treatment of the patients might otherwise be merely imitative and empirical, and not calculated to improve our knowledge of the best treatment of this lamentable disease.

No medical instruction, with the marked and excellent exception of Maryborough, is attempted at these institutions, although they afford admirable opportunities for the study of the treatment of the insane. The attendance of pupils, under proper rules and regulations, could be allowed without detriment to any party, and it appears to us that no medical officers (and none but medical men ought to be appointed) should be placed at the head of a district lunatic asylum, who cannot produce testimonials of a diligent attendance at a large lunatic asylum for a definite length of time. An address by Dr. Conolly to the Provincial Medical and Surgical Association, which met at Birmingham in 1834, has been lately published and we cannot refrain from making the following quotation, as it is in entire accordance with our observation: In the clinical study of mental disorders no advance can be reported; it is yet entirely overlooked in English medical education. Hospitals for lunatics are closed for students, and the knowledge of mental affections makes little or no progress. As a consequence of this, not a year passes without some notorious case of insanity being brought before the public in a manner reflecting little credit on the conflicting medical authorities, whilst instances of injudicious or improper confinement of patients are not unfrequent. To the same negligence of the whole subject it must be attributed that we have so few aids to a knowledge of the condition of the brain in the various forms of insanity, that the pathology of insanity is so uncertain and incomplete, and the treatment so generally empirical. Our larger lunatic institutions have contributed little or nothing to our knowledge. When the public establishments are, as under proper regulations they might be, schools of instruction, we shall learn how much our practice in these distressiug disorders may be improved.

(*To be continued.*)

ROYAL PHARMACEUTICAL

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE XII.

Bubonocele.

Having, in accordance with the method I proposed to pursue, detailed the circumstances which relate to operation in the most common form of bubonocele and scrotal hernia, I purpose now to consider that variety of inguinal hernia in which the protrusion passes the abdomen by a route different from the former, and by a course which is more direct. The contrast which exists between these two preparations will assist your understanding. The one is a fine specimen of oblique descent, when the parts are seen in a state nearly natural. The other is a specimen of that disease with which our concern at present lies. It is equally free as the former from complication, and it is well calculated to address your senses with instruction.

This rupture, you perceive, is situated at the external ring, where, in lifetime, it first becomes prominent, and at which part its connexion with the spermatic cord is in the first instance set up. It has burst through the boundaries immediately behind the external ring, forcing the transversalis fascia, throwing towards the rectus the combined insertions of the internal oblique and transverse muscles, and, in some rare instances, separating the fibres of that common aponeurosis by which they are inserted into the pubis. An anatomist at once perceives the relation which must from the first exist between such a hernia and the epigastric artery. Thus that relation is palpably seen: the sac lies close on the tuberosity of the pubis, and to the pubic side of the vessel here injected. It is characterised by all the usual symptoms of hernia. By the absence of fulness along the spermatic canal, this commencing stage can readily be distinguished from a protrusion in the usual course. However, the same facility of diagnosis will not be found to attend its more advanced growth. Resisted at the inner side by the muscular attachments already mentioned, as well as by the rectus, its neck extends towards the ilium, and conceals as much of Poupart's ligament as any advanced stage of ordinary descent. The difference of the route by which both forms of the disease return into the cavity of the abdomen, while they are yet in a state of recency, for the one retires by an oblique, and the other by a course much more direct, can here afford no sure discriminating guidance. In cases of long date and of large size, both seem to occupy the same passage, a circumstance readily understood by such explanations as have been already given to you. It is this identity of appearance that leads to the caution it is so necessary to observe when the condition of the parts demands the application of the knife, for you can never easily comprehend the extent to which the epigastric artery might be involved by miscalculating its position. Examine these two preparations. They are nearly of the same magnitude and form; they seem to be examples of the same kind of disease, yet the situation of the artery is essentially different in each. They were found in the dissecting room at the same time. When some of you first called my attention to them, you may remember I did not venture to decide between them. You were present when they were made the subject of close dissection, and you

know I did not then pronounce an opinion until doubt was cleared away by finding a different relation of this vessel to the neck of each. This shows you that dubious cases exist, and, consequently, teaches you the importance of that rule which, in the midst of ambiguity, can give safety to requisite dilatation. You perceive, to divide inwards in this instance, may lead to dangerous hemorrhage; and to divide outward in that, may be followed by an equally formidable result. Both directions are therefore to be avoided, and that new one is to be chosen, which, while you look upon these things, must be suggested to your minds. Right upwards is the line in which the knife should move. There you can indulge full liberty of incision; and there, that indulgence is thus anatomically proven to be exempt from casualties which beset any other plan of proceeding.

In the operative steps, taken to expose the contents of a hernia of direct descent, regard must be had to the spermatic chord. In ordinary cases of oblique protrusion, that congeries of parts lies behind the tumour, and is thus removed from the reach of mischief. But now these matters are very differently circumstanced, as can be understood at once by a mere glance at this preparation. Here you have in the subject two direct herniæ. The sacs have been duly distended and dried, and the chord has been carefully preserved in the relation in which it was originally found. The artery is not, at either side, on the full front of the sac; it lies more to the iliac side, mounting upon its convexity. Here is a cast, taken from a subject with double direct rupture; that of the left side small, the other considerable, though still much confined to the region of the pubis. In the lesser, the chord maintains the relation expressed in the next specimen; in the other, after it has lain upon the sac for some way, it seems as it were to glide from its prominent surface, then to reach the outside, and finally to be concealed in some measure behind its bulk. The lesson to be deduced is not difficult to read. We are plainly instructed to advance with a proper degree of circumspection, grounded upon the facts now before our eyes. With whatever rapidity we may advance where we are concerned with larger cases of that disease, we must be exceedingly careful in all we have to do where there is less development, and the spermatic chord is thrown into a place of more prominent risk. This precaution is equally called for in any case of an equivocal nature, according to the views we are now contracting, when operation extends to the superior part of the tumour, for we now can be certain of the amount to which the chord may be engaged. In all instances where you hesitate as to whether an inguinal hernia be oblique or direct, feel for the spermatic chord; sponge the wound frequently and with care; satisfy the touch and the eye; and now that you are convinced this body may be hernia, you are to pause, to examine, and to decide, before daringness, which is often no other than disregard for a patient's life, ought to be permitted to sanction one single step of further proceedings.

With respect to the use of the knife in these cases, I do not feel that any other admonition is necessary to solicit your attention; and should the consideration of new subjects awaken me to a sense of any omission, you may be assured I will endeavour to fill up any void I may have left behind, with as much judgment as I can exert, and with the best abilities in my power to supply.

To my general instructions on the point of taxis, as applicable to such cases, I have nothing to add. As to the adjustment of trusses, I have only to observe, that from the first they require a nearer situation to the pubis. They must not press on the bone, for this will defeat the intention of their use, and cause an undue pressure on the chord, which, I may now remark, it is much harder to defend from inconvenience in these cases, than when the hernia has from the first observed an obliquity of progress. I shall now just state, that I once saw an instance of purely direct descent, which could not be distinguished from femoral hernia until operation had advanced. I at present withhold allusion to the causes of embarrassment, to which I must advert in speaking of that particular form of an affection so long under our justly deliberate consideration. When ventro-inguinal herniæ are fully within the scrotum, they preserve the same relation to the testicle and all other scrotal parts, as if they had originally escaped through the spermatic passage; and when they are strangulated by the orifice of outlet, you are to consider all the structures concerned in that opening to be equal participators in the restraint. They are blended together by adhesive union in the manner sufficiently explained by these preparations, so that all must be

involved in every well executed incision of dilatation.

In treating of congenital hernia, it is not to be expected that I am to engage in a close anatomical description of such circumstances appertaining to the descent of the testicle as are presumed to be satisfactorily ascertained. Whatever is essential to an acquaintance with the pathology of the complaint, I will introduce on their proper occasions; and in furterance of this intention, I commence by exhibiting a preparation in which the tunica vaginalis testis has a free communication with the cavity of the peritonæum, the testicle having arrived at its scrotal destination. This subject, which was almost four months old, furnished the only specimen I possess of this imperfection at a period below puberty. Now I am surprised at this barrenness of my collection, when I recollect that hundreds of young bodies have been dissected within these walls, and that both principals and pupils are ever vigilant upon a matter which is sure to engross no moderate portion of your curiosity. Even in years more advanced, but few examples have been found; so that we are of necessity induced to believe that nature *very, very* seldom indeed omits a completion of a design which in these few instances she appears to have neglected to fulfil.

During the continuance of this state of these parts, we see a free opportunity is provided for the protrusion of intestine; and therefore you expect to meet such an occurrence at that time of life in which nature may not yet have occupied herself in the effort to repair her own defects. Infancy is the period of life in which this disease is judged to be most prevalent. Still, if we compare the number of cases in which congenital hernia is presumed to exist, with the infrequency of those supposed absolutely necessary to that presumed existence, I think it may be justly doubted whether the infantile form of inguinal hernia is, in fact, the disease it is usually esteemed to be. You never saw a case of inguinal rupture in an infant, which was not pronounced to be congenital, that is, one in which the tunica vaginalis testis is the sac in which the intestine is contained. But I cannot altogether subscribe to such a position. The argument on which I repose my assent to the general opinion rests on my anatomical opportunity, to which I have referred. I have had no means of weighing my conviction by the standard of pathological investigation, nor am I now familiar with any recorded observation, to which, as to a desirable criterion, I could appeal to decide its value; so that I must still entertain the idea, that most of the ruptures embraced under the pathological head congenital, do really belong to that class of inguinal ruptures included in the terms oblique descent.

The full pathological condition of scrotal congenital hernia is this: first, the tunica vaginalis testis is the sac in which the protruded viscus is contained; secondly, the intestine is thence admitted into close contact with the testicle; thirdly, as no intervening structures are to be forced asunder, this relation between these organs is rapidly, or, I may say, from the first established; fourthly, the intestine lies in front of the testis, descends to its interior extremity, and, by stretching the common cyst, it may, as it does in many instances, reach even the lowest region of the scrotum; and, fifthly, the hernia in the whole of what is called its congenital course commences with the beginning of the chord, and follows it in its progress to the testicle; sixthly, the chord and testicle ever lie posterior to the intestinal hernia.

In adult life, the diagnosis between congenital and other forms of ancient inguinal and scrotal hernia is scarcely to be determined. Indeed, if the history of the case is obscure, I do not know any means by which we can with certainty decide. Were a man of twenty to show me a hernia which he had from childhood, I might be disposed to conclude he laboured under a congenital disease. Yet here I might assuredly be mistaken, if I read my experience by a proper light. To refer to the manner in which the testicle may be situated, though satisfactory in some recent and less complicated instances, will be found far from being a conclusive evidence, when we remember the changes sometimes attendant on the development of the more common forms of scrotal rupture; for in these the tumour often descends below the level of the testis; and then, in the disease, there exists the same relation between testicle and intestine as observed in the congenital affection.

In an operative point of view, I do not perceive many advantages to arise from accuracy of diagnosis, so that we are not to be deterred in those cases in which it may not be in our power to decide. Aware how liable we are to err in doubt-

ful cases, we will keep observation on the alert, and we will go forward thus prepared for any circumstance which may present itself, as the parts are unfolded by the knife. No rules applicable in ordinary cases of scrotal hernia, are here sufficient for the operator, until he descends to the presumed sac. The same parts are to be divided, and the same cautions are to be regarded. It is only when that membrane is exposed that we require to pause; not on account of any difference in the actual manner in which our instrumeuts are to be used for the purpose of opening into its cavity, or to protect the testicle from injury, for that seems wholy out of the question; but because we desire to preserve the vaginal tunic as far as possible, that the testis may be defended against protrusion, and the troublesome consequences likely to be entailed by such an occurrence, may be avoided. Every person who has seen the tunica vaginalis extensively opened by disease, by accident, or by the knife, must acknowledge the fact to which I here refer. The natural contractility of the scrotum causes it to shrink towards the posterior part, whither it is accompanied by this serous membrane, which thus obeys the action of the only structure it is attached to anteriorly. Divisions of the mere scrotum seldom heal by the first intention, even in the most favourable circumstances; but when it and the vaginal tunic are freely opened, I can say that, at least, in my own practice, such a union has never taken place. These are the reasons which forbid denudation of the testicle; and although others could be added, I forbear from further particularization, as I consider these to be sufficient evidence of the propriety of avoiding extensive division of the investing membrane.

If, then, we are engaged with a congenital hernia "ab initio," or if we find it to be such by proof afforded in the course of operation, our care must be to spare the tunica vaginalis. It must be entered by our knives; and the question is, as to where that entrance shall be made. This material point is easily settled: we have only to recollect former principles, and not to open more of any sac than is absolutely required. In this instance, however, a little more nicety may be recommended. It is best to open as near the neck of the sac as circumstances and safety will permit; but in the situation in which the obstacles to be opposed reside, and, of consequence, it is in that situation we are to do every thing necessary, and no more than is necessary, for their removal. Well, we are to enter the sac as near to the rupture as we can, with a due regard to our object. When this is done, you have no occasion to deviate from the general instructions you already understand. Every future prooeeding being to be regulated by those whose guidance we acknowledge in all inguinal hernia of oblique descent.

Here, however, some new circumstances may present themselves, for which it is proper you should be prepared. For instance, a congeninal hernia may exist although the testicle may not have descended into the scrotum. It is well known that this organ is arrested in various parts of its natural course. Here, for example, the gland lies immediately above the internal ring, and there it appears to have acquired its full development. You observe the peritonæal passage to the scrotum is closed so perfectly that not a trace of its having once been, now remains behind. Here the testicle occupies the inguinal canal, inclosed in its vaginal covering, which still remains open to the cavity of the abdomen; and in a third preparation you have this gland immediately outside an external ring of unusual diameter, so that it is probable it sometimes retired within it, as we see it in lifetime occasionally to happen. Now, I say it is proper these things should be held in view, as we are then prepared to contend with certain complications to which such unusual positions of the testicle may give rise. Thus, this body may be a principal agent in maintaining strangulation. I remember a case of this nature: the testis and intestine were both lightly embraced by the external ring. The operator endeavoured to disengage the former, that if possible he might avoid the necessity of dilatation. He first attempted to push it into the abdomen, but in this he did not succeed. His assistant, who knew more about the matter, advised an effort in the opposite direction. This was more efficient; the testicle was easily drawn down, and the intestine was then reduced without any additional operation. I also remember another case in which stricture was produced by an inflammation of the testicle induced by improper application of a truss. But here it was necessary to dilate. The intestine was then returned; the testicle was left undisturbed, and a suitable antiphlogistic treatment was carried into execution.

It has been remarked, that nature insulates the tunica vaginalis at a very early period after the descent of the testicle. But it is plain from what is known, and what you have this day seen, that the process by which the insulation is accomplished may sometimes be interrupted, and that the defect may not be repaired even in the time of adult years. The early intrusion of intestine, and even an occasional subsequent descent, seem well calculated to perpetuate the imperfection. But how it happens that many in whom one or both testicles have never taken their proper place, shall remain exempt from congenital rupture, is a matter which has not yet been satisfactorily explained. Numbers of such instances have passed before my notice, and all have excited my surprise. Although the testicle falls short of its destination, may it not so occur, that the vaginal tunic shall have closed? Indeed, such an opinion seems to be authorised by one of our preparations, for here there has been an imperfect descent, and yet there is no vestige of any preceding aperture. I can explain this freedom from liability in no other way than this, which still does not rest on grounds so extensive as to be wholly satisfactory. It may be objected that deficient advancement of the testicle may have been attended by a deficiency in arrangement and development of all the accompanying apparatus. The objection is plausible, and has its weight, until it is recollected that congenital hernia sometimes suddenly appears in manhood, a circumstance which goes to prove the existence of a vaginal tunic, notwithstanding the absence of the testes from their regular situations.

Fearing that in my pathological observations I may have omitted to take notice of the connections which are formed between the testicle and those parts which in this disease are brought into contact with it, I may here briefly remark, that such adhesions are usually maintained by bands, and that these do not exhibit the characters of new formations, being generally whitish, and of a dense resisting structure. In whatever part of its career the testicle may have been arrested, these are found, so that they are not always to be looked at as a consequence of the prevalence of irritation subsequent to the period of full descent. When such adhesions are extensive and intimate, it is best to leave them undisturbed. When their length is sufficient to admit of a convenient division, I am an advocate for their separation, as then the hernia may admit of reduction, and means of future restraint may afterwards be aptly applied.

The adjustment of a truss in congenital hernia is difficult only in cases where the testicle is so situated as to expose it to the inconvenience of pressure. Upon this point I have no counsel to offer you. Without pretending to any great skill in mechanical devices, I have fruitlessly exerted all my little ingenuity, so that I have now only to add, I have long abandoned all further trials, and I am now content to dismiss the subject of such complaint with such admonitions as will defend them from the danger of ignorance and imposture.

I here subjoin a few observations relating to the hernia infantilis of Mr. Key, who has given that term to a variety of scrotal rupture, which he was the first to discover and to describe.

In these cases, matters stand pathologically thus: the testicle with its vaginal appendage is duly developed, and the aperture of communication with the abdomen is effectually sealed up close to the abdomen; but the process of obliteration has not yet extended to any other part of the cervix of the vaginal cavity. Into the tunica vaginalis while thus circumstanced, a hernia formed in the usual way, protrudes, and may finally advance into contact with the testicle. Now, in such cases, it must be plain to you, these sacs are to be divided before we can arrive at the contents of the tumour, the external, being the tunica vaginalis, the internal the ordinary hernial sac. You see there is sac within a sac, and this is the main point upon which an operator requires to be informed, for in no other matter can a difference influencing our operative proceedings be found from which we have seen in the most ordinary cases of oblique inguinal descent. I remember to have shown you a new hernial sac embraced by an old one. My explanation then given will assist you to comprehend me here, if there has been any obscurity in my manner of instructing you in the present particular; for I can perceive a very close similarity in the processes which go on in the formation of both diseases.

I have no recollection of ever having met a congenital inguinal hernia in a female. Yet such a rupture has been mentioned by some, and you can easily understand how it may happen, if you do not forget the small process of peri-

tonæum which descends on the several ligaments through the spermatic canal. If I saw a hernial swelling near the pubis in a female child, I would conclude it to be of this nature, and should a case of this nature require an operation, you have only to pursue that course for which you are already prepared, inasmuch as there is nothing here to produce unexpected embarrassment. This hernia in the female is slow in growth, and for a long period is confined to the region of the external ring. But when it increases, it passes into the labium pudendi. Aware of the structure amidst which it lies, nothing can take place in operation to awaken doubt or to impose delay. It must be recollected, however, that pudendal hernia may take place by the side of the vagina, and that there is a varicose affection of the viscus belonging to the labia, not unlike our varicocele, by which the unguarded have been imposed upon within my knowledge. The criterions relied on in the varicose affection of the spermatic chord are in this instance altogether diagnostic.

I shall close this subject by the encouraging assurance that congenital hernia, when early attended to and properly controlled, is a very remediable defect. I cannot use the same comforting language as to those cases which have not been submitted to our management sooner than the adult time of life; for these I am sure I may pronounce the malady to be incurable.

APPLICATION OF PERCUSSION AND AUSCULTATION TO DISEASES OF THE HEART.

PATHOLOGY, SEMEIOLOGY, ETIOLOGY, DIAGNOSIS, PROGNOSIS AND TREATMENT OF ENDOCARDITIS.

ENDOCARDATIS ACUTUS ET CHRONICUS.

The indefatigable M. Bouillaud is entitled to the merit of having first described inflammation of the lining membrane of the heart, in the same accurate manner as he has done that of the external membrane of the same organ (pericardium), as already stated. He also included inflammation of the fibrous tissue of the valves.

Endocarditis was not fully described or duly estimated until 1824, when M. Bouillaud recorded its history in an essay on Inflammation of the Internal Membrane of the Heart and Great Vessels. Baillie, Burns, and Laennec had previously described inflammation of the internal membrane of the heart in a few isolated cases, but none of them expatiated upon the subject. Corvisart was not aware of the disease. Bouillaud subsequently described inflammation of the internal coat of the aorta, and he is solely entitled to the great merit of elucidating endocarditis as an exclusive inflammation. He has evinced the most laborious and careful observations on diseases of the heart, pericardium, and the large vessels adjoining the centre of the circulation, and his researches enabled him to prove that all the morbid results of pericarditis, which are enumerated in the preceding article, were also to be found in the internal membrane of the heart. He has detailed numerous autopsies in verification of this conclusion. With a pathological zeal which reflects the greatest credit upon him, he examined all the bodies of patients who had died in the hospital La Charité from 1828 to 1832, and accumulated a series of facts which render him eminent as a pathologist, as they fill up great lacunæ in pathology. He tells us that he was not influenced by any preconceived theory; but, on the contrary, that this theory was established after a rigid estimation of positive facts. He candidly acknowledges the observations of English physicians. He refers to Dr. Baillie's Morbid Anatomy, a work arranged under the auspices of the author's illustrious uncles, William and John Hunter, in which inflammation of the venous valves is described, and these covered with plastic or coagulating lymph. Mr. Allan Burns had also described inflammation of the cavities of the heart (Work on Diseases of the Heart, 1809). He found on the internal surface of the right auricle a layer of flocculent lymph, and the left auricle partly ossified and covered internally by a layer of coagulating lymph.

M. Kreisig also described true endocarditis under the term polypous carditis; but polypi of the heart are observed in cases in which there is no endocarditis. Laennec likewise commented upon the disease under consideration; and Dr. Hope has also an instructive chapter on inflammation of the interior of the heart and arteries. M. Bouillaud remarks that this author has not propounded anything which he himself had not observed; but upon this statement I cannot offer a positive opinion. It is possible, from the original researches of Dr. Hope, that he might not be aware of those of our

celebrated Gallic contemporary; but it is equally certain that he struck out a new path in pathology for himself, and that he might have arrived at this conclusion without any knowledge of M. Bouillaud's observations.

It is easy to explain this fact, when we consider the difficulties that exist, even now, as regards the reciprocal transmission of British and French works into England and France.

M. Bouillaud describes endocarditis in the same manner as pericarditis, and I shall condense or epitomise his observations and indite his conclusions.

Observations on endocarditis during the period of sanguine congestion, of suppuration, and of incipient ulceration.—M. Bouillaud gives the histories of thirteen cases which are analogous to his numerous reports on pericarditis. These are most instructive and valuable, and perfectly conclusive*.

The second category is equally well attested by eleven cases or observations. It is thus entitled:—

Observations on endocarditis during the period of hypertrophic thickening of the inflamed tissues, and of the development of adhesions, cellulo-fibrous membranous, or fibrous patches, or vegetations and granulations.—The first four cases present us with examples of adhesions of the valves of the heart to the internal surface of this organ, lesions which have not been hitherto described by authors of works on diseases of the heart, and which establish a new relation between endocarditis and the other inflammations of serous membranes. The next three cases are examples of false membranes of greater or less extent, which are organised on the surfaces of the cavities of the heart, which M. Bouillaud terms spots of endocarditis, because they exactly resemble those on the pericardium already described. Finally, the four last cases are relative to granulations or vegetations of the valves of the heart. The whole of these cases are replete with instruction, but their histories would occupy too much space, and they ought to be perused in the original work, or the translations of it in the different languages, by every medical practitioner. For my own part, I cannot but admire the laborious observations, and the valuable conclusions of M. Bouillaud, which abound with sound practical information.

The third category is equally novel and important as the preceding ones, and this I shall but briefly notice, for the reasons already stated.

Observations on endocarditis, followed by the fibro-cartilaginous, cartilaginous, osseous, or calcareous thickening and induration of the valves of the heart, with or without contractions of the orifices of this organ.—Twenty-three cases illustrate this section. In the first six are reports of induration of the different valves of the heart without contraction, or with very slight contraction of the orifices to which they are adapted. The next fifteen, out of seventeen, present examples of induration of the valves, with considerable contraction of the orifices. Three of these cases are relative to induration of the mitral valve, with contraction of the left auriculo-ventricular orifice. Two cases exemplify induration of the aortic valves, with contraction of the aortic orifice. Three are relative to induration of the tricuspid valve, with contraction of the right auriculo-ventricular orifice. The next four are histories of cases of induration of the valves of the pulmonary artery, with contraction of the corresponding orifice. The last three present examples of induration of several valves at the same time, with different contractions; in two of these cases, the aortic and mitral valves are indurated, and the aortic and left auriculo-ventricular orifices are contracted, and in another case, the same lesions exist, with induration of the tricuspid valve, with contraction of the right auriculo-ventricular orifice. Most of the subjects of these observations were young; some were adults, and others had arrived at old age. There was no trace of inflammation in the ossifications of the valves of old persons. It is worthy of remark, that cartilaginous, osseous, and calcareous induration of the valves were observed in young subjects, and even in infants.

In fine, some authors have ascribed contraction of the pulmonary artery to congenital conformation, but M. Bouillaud contends that induration of the valves is the result or consequence of endocarditis, which has passed into the chronic state.

Exposition and appreciation of the anatomical characters of endocarditis.—The anatomical characters of this inflammation are precisely the same as those of pericarditis, but also offer peculiar characters, on account of the structure of the endocardium, or lining membrane of the heart, and others from the presence of

* Op. cit. 1836.

the blood incessantly circulating through the cavities of the organ which the membrane covers. It is most important to know the anatomical characters peculiar to each of the stages of endocarditis, if we wish to understand the principal symptoms in a clear and precise manner. It is necessary to study in succession the alterations in the fibro-serous tissue itself, the products caused by inflammation, and the state of the blood contained in the cavities of the heart.

The redness of the internal membrane of the endocardium may be slight and evanescent soon after death, as in the pericardium, or it may be intense, or brownish, or violaceous. It may be local or general, and may be found in any part of the lining membrane of the heart. It is often confined to the valves alone. The redness is more intense in the right than in the left cavities, on account of the blood not being of so vermilion a colour in the first as in the second. However this may be, the redness is not caused by capillary injection, but by a kind of sanguine tinting of the internal membrane of the heart. It does not ordinarily penetrate under this tissue, and is removed by ablution, but does not resist maceration when sufficiently prolonged.

M. Bouillaud is convinced that redness of the endocardium and large vessels is often caused by cadaveric imbibition purely, inthe bodies of those who have died of putrid or typhous fevers, in which the fluidity of the blood is greater than in the normal state, and most suited to be imbibed by the internal membrane of the vascular system. His opinion, contrary to that of M. C. Broussais, is that the redness of inflammation and that of imbibition cannot be distinguished except by the usual appearances of the results of inflammation on the part of the endocardium on which they appear. These are—1. Thickening and softening of the parts on which the redness occupies. 2. The presence of a certain quantity of pus, of pseudo-Membranous matter of adherent plastic lymph, or fibro albuminous matter. 3. The coincidence of the redness in the vessels (arteritis, phlebitis) which positively prove the existence of inflammation before the deaths of the subjects.

It appears, from numerous cases, that acute endocarditis terminates as already stated and rarely in gangrene, a disease seldom found in sero-fibrous tissues, and that it commonly causes the coagulation of a greater or less quantity of blood in the cavities of the heart. In this manner it resembles arteritis and phlebitis. But the concretions consecutive on acute endocarditis are totally dissimilar to that of those that are sometimes found in the heart after death, as they are white, elastic, glutinous, adherent to the parietes of the heart, and entwined round the valvular tendons and fleshy columns. These are semi-organised, are analagous to the buffy coat of the blood, and some of them contain red lines which are really nothing else than the rudiments of vessels.

These concretions vary in size and configuration and they are generally prolonged into the large vessels. In similar circumstances they are longer and more abundant in the right than in the left cavities of the heart. They are generally adherent to the free borders of the valves, on which traces of them are found after repeated ablutions. It is very probable that these fibrinous masses may be organised and transformed into vegetations or granulations. When endocardities does not speedily terminate by resolution, and when it is protracted for 15, 20, or 30 days, or even longer, the inflamed tissues become more or less thickened, and the plastic part of the anormal products, secreted by these tissues, pass from the amorphous state, to that of organization. In such cases we find according to the circumstances of position, of configuration, and of composition of the organisable matter, either vegetations or granulations, cellulo-fibrous adhesions, fibrous or sero-fibrous layers, &c.

Vegetations or granulations are generally situated on the free borders of the valves, and very frequently on the internal surface of the cavities, and especially of the auricles. These vegetations or granulations were termed globous and verrucous by Laennec, and more accurately albuminous and fibrinous by Bouillaud. They may become also corneous and cartilaginous. These vary in size and form, from the size of a millet seed to that of a grain of hempseed, or a small pea. They may be distinct or confluent and resemble a cauliflower. They may be round, spherical, elongated, cylindrical, or flattened, and their surfaces may be smooth, polished, unequal, or rugous.

Vegetations of the valves or of the internal parietes of the heart are very often accompanied by fibro-cartilaginous or calcareous indurations of the valves. When these vegetations are numerous, confluent, and grouped so as to resemble a cauliflower, they prevent the action of

the valves and more or less contract the orifices to which these are adapted, impede the circulation of the blood through the affected side of the heart, and lay the foundation of many diseases of the organ. The pathology of the adhesions induced by endocarditis was not fully described by any author on diseases of the heart except M. Bouillaud. He observes that it is easy to understand that adhesions are much less common in endocarditis than in inflammation of other serous membranes. The current of blood which circulates through the cavities of the heart, and the movements of the valves are powerful obstacles to the anormal formations under consideration. Hence it follows that adhesions only occur at those points where the obstacles are in the slightest degree. Thus they are most common at those parts of the valves which are most immobile and on the corresponding parts of the ventricles. These adhesions considerably derange the circulation of the blood by preventing the valves from completely closing the orifices to which they are adapted.

The opposite borders of the valves may adhere to each other, examples of which will be described hereafter.

Again, the whole or a part of one cavity and of different cavities of the heart may be lined by false or adventitious membranes in a single or in seperate layers.

In other cases there may be spots or patches on the endocardium, such as are sometimes formed on the pericardium (See Pericarditis.) In a great number of cases the lining membrane of the heart is thickened by false membranes. It becomes hypertrophied, loses its transparency, its surface becomes less polished, less villous, unequal, and covered with rugosities. The hypertrophic thickening extends to the fibrous and sub-endocardic cellular tissue. M. Bouillaud has frequently observed hypertrophy of the valves and of the tendinous zone where their extremities are inserted. The bicuspid valve is particularly subject to this consecutive hypertrophy, and a contraction of the auriculo-ventricular aperture.

We have next to consider the third period of endo-carditis, in which cartilaginous, calcareous, and osseous indurations occur in different parts of the heart, and of the valves in particular, with or without contractions of the orifices of the heart.

These degenerescences may vary from the size of a lentil to that of a finger nail, or even larger, and the valves may become completely cartilaginous or osseous in the fibrous zone and extremities or points of the valves, and the structure of the valves may be only partially affected, while the other parts may be hypertrophied.

The osseous or calcareous incrustations of the valves form various configurations. They are sometimes arched, circular, elongated similar to stalactites, of a pyramidal or irregular form, or round, the size of a pigeon's or pullet's egg. These calcules, or stones, are rough and unequal on their external surface, and may form on the surface or in the substance of the valves, or may be prolonged into the substance of the heart itself. These growths more or less impede the functions of the valves, and prevent them from closing the orifices to which they are adapted. The effect of this will be, that the fasculi or blundles which form the valves may be perforated, lacerated, thickened, or indurated; and in one case one of the aortic valves was almost entirely detached, and it hung and floated into the cavity of the aorta. In a great number of cases the indurated, ossified, or petrified valves unite, except in the centre, where there is an irregular, oval, or elliptic aperture or transverse bands. These changes are more frequent in the left, or arterial, valves, than in the right, or venous.

Contractions of the orifices of the heart, consecutive on the different kinds of valvular indurations and transformations deserve great consideration and reflection. In order to appreciate them correctly, we should call to mind the normal or natural state of the valves. We shall then find that the contractions are very variable, the extremes being from the size of the extremity of the little finger to that of a goose-quill. Whatever the size of the aperture may be, it is permanently the same, and may be round, oval, or elliptic. In some cases the affected valves are but partially elevated after the passage from the auricles of the blood into the ventricles, or from these into the aorta or pulmonary artery; and in others the valves are absolutely depressed under the same circumstances.

It must be manifest to every one acquainted with anatomy and physiology, that the morbid changes now described in the valves of the heart must be productive of numerous disorders and diseases of the central organ of the circulation of the blood, that bad health must be induced, and the premature and painful suffering must be the consequence. How many deplorable and melancholy

examples daily occur, and how many have fallen under my own observation, that might have been prevented or obviated by proper treatment. R.

LONDON MEDICAL EDUCATION.

THERE is perhaps no subject which is more suitable, or which in all respects is more calculated for discussion at this epoch, than that system of medical education which is now followed in the different schools of this metropolis.

Until the "hideous monster of reform" first exhibited itself, now about twelve years ago, in the shape of a meeting of a great mass of general practitioners, medical education was carried on according to one uniform and unmolested system. The various schools were then all organized, and firmly united with the three corporate bodies into which the practitioners of medicine are composed. The great mass of teachers were either themselves members of the governing bodies, or they were so linked together that their interests were one and indivisible. So, at the period to which we have alluded, a system of corruption and misrule had arrived at its acme.

It is impossible to look back to that period, the period when nearly one thousand practitioners assembled together, without feelings of wonder and surprise at the state of the government and education of the profession which then existed. The College of Physicians, whose assumed power, concentrated in a few impotent individuals, was then only employed for the iniquitous purpose of monopolising all places of emolument which came within their grasp, as well as for crushing the neophites of their body, and of preventing even graduates of other universities, except those of their own favourite schools, of gaining admission into the worthless pandemonium of Pall Mall East.

The Worshipful Company of Apothecaries clandestinely associated with, and conspiring against the surgeons, along with the dowager of the College of Physicians, fortified with the strong arm of the law, ruled with omnipotent sway.

The College of Surgeons exhibited a picture far more hideous and more monstrous than either the Royal College of Physicians or Worshipful Company of Apothecaries. The ruling body of Lincoln's Inn Fields may be justly said to have arrived at its greatest state of *perfection* about this period; by every art and every stratagem that could be contrived by the most ingenious minds, all their schemes had now come into full operation; and the holy junta, a ruling body of the College of Surgeons, were now enabled literally to enrich themselves, and munificently to adorn and contribute to the funds of their corporation. This they effected by introducing a fraudulent system of education, so as to extort from the pockets of the student those enormous sums of money, the amount of which the public has since become acquainted with. Not content, however, with thus surreptitiously obtaining money, not only from the student in the shape of lecture fees and certificates, they levied vast sums for granting diplomas, whilst the council of the College loaded with every possible insult the members whom they elected, or the community whom they thus plundered.

Some of our readers may recollect, and the circumstance should never be allowed to slumber, that for the public lectures which were then given at Lincoln's Inn Fields, a theatre was constructed, to which a back door was attached, by which alone the degraded commonalty were permitted to enter, whilst the aristocratic junta themselves were courteously received within the great portico of the college, welcomed by their contemptible menials.

The museum of J. Hunter, which had been munificently presented by the Government, not only for the whole members of the College but also for the benefit of the public, was, at this eventful period, completely monopolised by the Council; and the use which they made of their usurpation and prerogative has been fearfully exemplified by the destruction of no less than twelve folios of the Hunterian manuscripts by Sir E. Home, who was at the time one of the chief rulers in the Council.

This state of the profession, and the condition of the then corporate bodies of which it was composed, was at the eventful period when the great meeting of the general practitioners took place, fully and luminously explained by Mr. Lawrence, who took the chair on that occasion; and any one who now reads the exposé which Mr. L. then made, and which, in the fervour of his zeal, he afterwards published, will not only be enabled to become acquainted with the real picture of the profession, but must have the candour to admit the essential services which Mr. Lawrence and those friends

who ardently co-operated with him on that important occasion, effected. Since that period we may trace, step by step, essential and sanatory changes not only in the general government of the profession, but more particularly as to the education of the student. And before endeavouring to point out the present state of medical education in London, it is interesting to trace the alterations which have been gradually taking place, and the events which have led to those changes and modifications in our different corporate bodies.

In no instance was a spirit of insubordination so strongly and firmly manifested by the commonalty of the College of Surgeons, as in throwing open the Hunterian Museum and Library, and of their claiming a right of entry by the front door to the theatre of the college. No sooner had they accomplished these points than fresh excitement was evinced in the case of the late Mr. Bennet. Even now it will be scarcely credited that this accomplished man and talented teacher, who before the close of his life was selected as the most competent individual to fill the chair of anatomy at the London University, it will scarcely be believed, that the council of the College of Surgeons had the audacity to refuse recognising his lectures; and though they were ultimately forced to acquiesce in admitting Mr. Bennet's claims as a competent teacher of anatomy, yet the corruptionists, and we lament to say that a great surgeon was one of their most zealous advocates, used every effort to prevent Mr. Bennet's tickets and certificates being received on an equality with those of their own sons, nephews, and other dependants.

The institution of the London University, it can easily be imagined, must have created in the high-minded council of the College of Surgeons feelings of apprehension and even of horror. The idea of a *public* institution, over which they were not likely to exercise the smallest control, and from which they were less likely to receive any pecuniary emoluments, could not have afforded them much gratification; succeeding events have proved how well founded their apprehensions were, as the success of that institution has been such as to have extorted, though only by instalments, all the privileges of their own schools, having been forced to admit not only certificates from the lecturers, but, much against their inclination as well as interest, to recognise the hospital which is now attached to that institution.

The foundation of King's College forms another epoch in the history of medical education. The corruptionists having used every means, and contrived various designs to check the progress of anything like reform in even the most faulty and rotten parts of their institution, notwithstanding which, the London University had progressively continued to advance; they were compelled, however unsuccessful may have been their efforts, to found another public institution, on purpose to check or destroy the reputation of the university. Aware, however, of the danger of creating a popular institution in injuring their own private establishments, they were induced to select from amongst their own numbers the professors of King's College; so that whilst they had these two purposes to serve, they laid the foundation of an institution on those very principles which have been the means of its limited success, amounting almost to its destruction.

Whatever may have been the defects of both these public institutions, it must be admitted that they had a powerful influence in calling the attention of the thinking portion of the medical public to our systems of education, and led to those important changes which have already, and which are rapidly going on.

The institutions, both of the London University and King's College, may be justly said to have given a death-blow to the old recognised schools of medicine, of which at this time we have ample evidence, more particularly in the Borough schools, one of which, whilst it may justly be enrolled in the list of the deceased, its chivalrous companion may be said to have the fatal symptoms of *constitutional irritation*.

The gangrenous condition of the *old* recognised schools, along with the deformities and ruptures of the joint stock company of Gower-street, have, however, it must be admitted, had, though very indirectly, a happy influence on medical education, an enterprising and talented individual having come forward in the character of *private* lecturer, and *private* schools having been founded, which, under the former regime would never have been tolerated, or far less recognised by the corruptionists.

ANGLICUS.

NEWS FROM THE NORTH.

Three events which all rapidly succeeded each other, have created a vast deal of interest and disappointment, of surprise and speculation in our medical community.

These were the arrival of that bright luminary Sir Charles Bell, or as our Lord Provost designated him, that *wandering* star which, he (the Lord Provost) was proud to say, had now become a *fixed* constellation. The next event was the deplomatic visit of Mr. Quain, from the London University, and the other, the incomprehensible and sudden appearance of the London Anatomical Inspector, Dr. James Somerville.

Sir Charles Bell, preceded by his museum, arrived safe, and it is but justice to say, that after his various wanderings, he seems delighted to return to the place of his nativity, which is a proof that the common saying, a Scotchman who once crosses the Tweed, never goes back again, is not without its exceptions.

There is something very interesting in tracing the history of men, such as Sir Charles Bell, he was the son of a dissenting clergyman of this good town, and was originally educated as a watchmaker. His brother John, who was a good deal older, had acquired great reputation in Edinburgh as a surgeon, both from his writings, his ability in performing operations, and as a very eloquent lecturer.

Circumstances induced Charles to give up the watchmaking business, and to study medicine. He had excellent opportunities of studying Anatomy in the dissecting room of his brother; and Dr. Barclay, who at that time officiated as John Bell's dissector, not only assisted Charles Bell in his anatomical pursuits, but being a good scholar, he taught Charles those elementary branches of classical education which his former views in life did not require.

After completing his medical education, and having for some years practised as a surgeon in Edinburgh, and also having assisted his brother in his anatomical lectures, John and Charles quarrelled, which induced Charles to go to London, now nearly thirty years ago.

We were all astonished that this man, who had attained so high a reputation in London, should have accepted the chair of surgery at our university; and it certainly does appear absurd, that whilst we are able here to educate professors for your London schools, and have at least twenty ready to fill up any vacant chair, that we should have imported one whom you did not esteem worthy of your patronage and support. But whatever value you must have put upon him in London, he will rather add than subtract from the fame of our medical school, which, I regret to say, is fast approaching to its dotage.

Wonderful is the chain of events. At the very time you are furnishing us with a professor, you forward a diplomatic messenger to us for a professor of anatomy. Here again you were compelled to supplicate us.

Your diplomatic messenger arrived here with letters of introduction from Dr. Turner to Drs. Christison and Craigie, the latter of whom invited him to dinner, and introduced him to Dr. Sharpey, and the whole matter of the election of Dr. Sharpey as professor of anatomy at the London University was speedily and definitely arranged.

Reports were afloat that Dr. John Thomson, whose diplomatic talents are universally acknowledged, had no small influence in the election of your new professor, and that the highest power, save royalty itself, was exerted on his behalf. I shall offer no other comment at present, but may furnish you hereafter with more particulars, and from time to time inform you of what is passing here. SCOTUS.

MONOPOLOGY IN THE SCHOOL OF THE DUBLIN COLLEGE OF SURGEONS.

SIR,—I rejoice that of late you have turned your attention to this quarter; I cannot but hope in consequence that Ireland and her institutions will be benefited by such direction of that talent and intrepidity, which confer equal honour upon the land of your birth, and the city of your adoption. When several Members and Licentiates of the College of Surgeons in Ireland thought fit, through the instrumentality of the press (that glorious, and in the end unerring minister of justice), to appeal to public opinion, and in her high court to demand the redress of many oppressive and injurious wrongs, which their own Alma Mater contemptuously denied them, I confess myself among the number of those who felt inclined to condemn these out-of-door proceedings, upon the generous, but perhaps boyish and mistaken grounds of "not telling tales out of school." But, sir, there must be an end to generous forbearance; it becomes not a generous failing, but a high crime, when

by mistaken mercy you suffer abuse to accumulate upon abuse, and wrong upon wrong; when you permit corruption to grow more insolent, and malice more malignant, but, above all, when principle itself, and even honour, are altogether perilled, by withholding the only means of retribution and redress that the griping hand of corruption has left you. These sentiments have been suggested by recent proceedings in the College of Surgeons, which are so characteristic of that miserably mismanaged institution (an institution so rife with wrong, and far more deserving government interference than even the Dublin Society itself), that they merit undying record in your talented and widely circulated Journal.

Formerly, in times long past, if a person were asked, what might be the uses and objects of a College of Surgeons? perhaps he might unhesitatingly reply, PUBLIC *advantage*, to be effected chiefly in three ways, viz. first, by appointing and enforcing a regular and liberal system of education, proportional to the science and knowledge of the day, to be tested by a *strict* and IMPARTIAL examination; second, by promoting and recording the improvements in arts and sciences, more especially those connected with the medical profession; third (last, and by no means least), by regulating the practice of the profession; on the one hand, vindicating its wrongs, and defending its rights and privileges; and on the other, fostering and enforcing a liberal and gentlemanlike spirit among its members, by affording at all times a high court of honour, for the nice regulation of those principles which cannot be defined in any written code of laws; which, though occasionally varying in their outward form, as they keep pace with the progressive refinements of civilization, are nevertheless founded on the unchanging essence of honour; principles which to the mean and sordid are subjects of ridicule and contempt, because they cannot appreciate them, but which the liberal and refined recognise among the strongest bulwarks, not only of the graces and ornaments of, but of the solid advantages resulting from the social compact; principles which are nowhere laid down, but which are the unerring, the valued, and congenial accompaniments of every generous and honourable bosom.

These, however, are the decried and exploded speculations of former days. Strong and vigorous, indeed, must be *his* ideality, who can imagine anything but their very opposites in the Irish College of Surgeons. Public advantage! that, indeed, has long been lost sight of. A College would now seem to be the proper instrument whereby the pecuniary interests, the empty pride, and the sordid malice of a small party may be advanced through the fitting agency of faction and corruption. 1. With this view, losing sight of all general principles and public interests, instead of laying down and insisting upon a complete system of medical education, thereby at once elevating to its proper tone medical science in the country at large, they prefer to degrade the whole College to the humiliating office of manipulating the most scanty course of the merest elementary principles, in order that the pockets of a few mercenary spirits may be filled with "vile trash." To render their system more complete, every device is had recourse to, that low cunning or unprincipled tyranny can invent, in order to crush *competition out of doors*, and increase monopoly at home: to this end legislation must bow, aye, and examination must submit. Of the *capabilities* and *impartiality* of their censors, I shall not trust myself to speak; sometimes, no doubt, a redeeming spirit appears among them, but as a body, it is enough to say, they are worthy of the factious few that in reality form their constituency. 2. Of the College, as a promoter and encourager, or as the historian of science in any single shape, it is impossible to speak, as from the hour of her foundation to the present moment, she has never condescended to appear in either one or the other capacity. This, in the minds of some, of course silly speculators, would satisfactorily argue, "there is something rotten in the state:" it is really nothing more than an apt illustration of the old philosophical dogma, "ex nihilo, nihil fit." 3. Passing by the wrongs, the rights and privileges of the declining profession of surgery, as the College has always done, few, at least out of the College, will deny the inestimable value of preserving, fostering, and, if occasion be, enforcing among the members of the profession, a liberal and gentlemanlike spirit of honour, which is almost inseparable from all those who are the real votaries of philosophy, or who have felt even the first refining influence of the Literæ Humaniores. How very successful the College is likely to be as an instrument in forwarding this desirable result, will at once appear by a short reference to recent proceedings.

All who have turned their eyes to the history of Irish Surgery, are well aware that for a long time the chief, almost the only obstacle to the complete prostration of the College into a selfish private monopoly, was the School of Anatomy in Peter Street, established by Mr. Kirby, which gave rise to a species of revolutionary war. Hostilities were carried on in a manner malignant enough, but still the decencies of civilized war were observed under the respective leadership of Mr. Kirby, on the one side, and Messrs. Colles and Todd on the other; the former on the defensive, the latter almost always the aggressors. All these individuals have now retired from the conflict. Mr. Kirby having for some years received the talented co-operation of Messrs. Brenan and Ellis, by whose indefatigable exertions it is but just to acknowledge THE school (now removed next door for better accommodation) was rendered far more efficient, and of course far more successful than ever, gave IT up entirely into their hands. Meantime, the College Job, after various manœuvring, had become almost the property, and certainly was under the management, the fitting and dexterous management of Messrs. Harrison and Jacob. Under this generalship new elements have been introduced into the strife, which, but for such machinations, might probably have softened down into a generous and honourable competition. Hating Messrs. Ellis and Brenan with a double hatred, for their unprecedented success had already brought several other rival establishments into the field, they determined to bring to bear against THE enemy every engine that unprincipled cunning and malice could suggest. The deadly weapons of religious and political bigotry (at once the ruin and the disgrace of this unfortunate land), were put in requisition; all the slumbering prejudices of those (alas, too many), who were subject to their influences, were roused from their torpor, as if anatomy could be tinged with popery, or surgery made subservient to liberal politics! Stratagem, too, and not of a very scrupulous character, has become a striking feature in their system of *tactique*, as will ever be the case when minds of a certain calibre are put in action by selfishness and revenge. Many of their *fêtes* crowd for illustration here: one, their last, will suffice, *ex uno disce omnes*.

A very short time before the commencement of the session, when all the schools were busy making arrangements and putting forth advertisements for the coming campaign, two of the *crimp serjeants* at the college were promoted from the ranks, thus affording Messrs. Jacob and Harrison an opportunity for one of their *chef d'œuvres*, which in their minds already annihilated Messrs. Ellis and Brenan, school and all. Seeing or thinking they saw congenial qualities in Mr. Leeson fitting him for *their* work, they determined to withdraw him, and thus leave Mr. Ellis at the commencement of the session without a demonstrator. Secret negociations were accordingly entered into, pending which Mr. Leeson, without saying a word, was a regular attendant at and took an active part in the councils of the Peter-street School, even stipulating for a more honourable position for himself in that institution. By and by, Mr. Ellis is informed by a third party that Mr. Leeson is not *his* demonstrator, but *one of the* crimp serjeants in the college, and is shortly favoured with Mr. Leeson's letter of resignation.

Naturally indignant at such conduct, Mr. Ellis writes to the Court of Censors, whose duty it is to superintend the school, begging of them not to countenance such violation of professional candour and etiquette, by fiating the appointment of Mr. Leeson. The court referred him to the college at large, thinking thereby to get rid of Mr. Ellis and his complaint altogether. Notwithstanding, however, the parties implicated, and the great exertions made, the college *did* enter into the feelings of Mr. Ellis, and desired the Court of Censors to make inquiry into the whole affair, and report to the college. This was accordingly done. The report consisted of a series of resolutions confirmatory of all Mr. Ellis's allegations, which were indeed undeniable, appended to which, the court put one of their own, *affirming that all this was perfectly consistent with the usages and etiquette of the profession.* This was all very natural, for Messrs. Jacob and Harrison, who form a very active moiety of the court, where they have to review and report on their own proceedings, and it is scarcely to be expected that they would condemn themselves.

But what did the college? They naturally looked upon Mr. Leeson as a comparative cipher in the transaction; many thought that Mr. Ellis might have overlooked the matter in silent contempt, and, not depending on Mr. Leeson's supposed recruiting abilities, have easily filled up his place; many regretted it had been

brought forward at all, but the body corporate could not accede to the modest request contained in the report, viz.—to declare, that *that* was the etiquette in a professional gentleman, which, if committed in the person of a servant, *the law* actually considers worthy of the treadmill; and this, for the sublime advantage of covering the schemes of Messrs. Jacob and Harrison and their new *protegé*. It was accordingly moved that the last paragraph of the report be expunged. Nothing could equal the excitement and violence of Messrs. Harrison and Jacob; every outrage of decency and order were perpetrated; they stamped, and foamed, and fumed, more especially Dr. Jacob, who, it is fair to acknowledge, on this occasion, even out-Jacobed Jacob. We forbear, out of pure compassion to Mr. Leeson, although Dr. Jacob declared himself to be his specially appointed advocate, to attempt even a sketch of his vulgar ferocious, vituperative jargon. Suffice it to say, that he ridiculed as most contemptible all notions of honour being binding on surgeons. "Let there be honour among thieves," says he, "but what have we to do with honour? Self-interest, and self-interest alone should be our guide. Parole, indeed; there was no honourable union between Leeson and Ellis; it was only a *liaison*, which he did very right to break when his interest prompted. This is what we all would do, or ought to do; it is what *I* did to Dr. M'Cartney; aye, and to Park-street; and what I would do to-morrow to the college if occasion offered." Would the expression of such sentiments, not to mention the manner and language in which they were uttered, be suffered in any assembly but the one? And yet, will it be credited, that this is the individual, now vice-president, that corruption and faction, monopoly and intrigue, have determined to put forth to the public as their chosen mouth-piece, to give public utterance from their president's chair to sentiments, to characterise which, at least in all honourable minds, it is but requisite darkly and faintly to hint at. Has not the profession noble prospects before it? Under his presiding influence, what pinnacle of honour, glory, chivalry is unattainable? Dr. Jacob is fond, in his ribald addresses, of alluding to the Corn Exchange to convey insinuations against his opponents, well knowing what a chord vibrates dear to that word; but we tell him, even in the lowest popular assembly upon Coal Quay, *he* could find models of order, language, and sentiment, which it would improve him to copy. I have often heard invidious comparisons between the two colleges poured forth by young physicians, which I have as often ascribed to little-minded prejudice; but sometimes, I confess, I am inclined to doubt if these insinuations be not founded in fact; if not at present, beyond a doubt they will be so at no great distance, should present influences be permitted much longer to exist. Members of the college should recollect this: such reflections are not unconnected with their interests.

The faction, however, had but a poor triumph: the college is not yet brutalised. Notwithstanding all their exertions, declamation, whipping in, and the grossest and most shameless favouritism from the chair, on the division, the numbers *pro* and *con* were equal. The amendment would have even been carried, but for two of the independent members, who were obliged to retire before division. It is unnecessary to add, that the president gave his casting voice to corruption, and thus determined a most unenviable triumph.

VERILOQUENS.

THE HUNTERIAN SCHOOL OF MEDICINE.

(From *The Times*, Tuesday, Nov. 8, 1836)

Yesterday evening, a meeting of the medical students, connected with this school, was held in the lecture-room, Windmill Street, to congratulate their teacher, Dr. Ryan, on his return to resume his duties. The meeting was very numerously attended, and the Doctor, on presenting himself at the lecture-table, was greeted with several rounds of applause. As soon as silence was restored,

Mr. J. F. CLARKE, as the senior pupil of the school, and chairman of the students, stated that he was deputed by his brother students to congratulate the Dr. on his return amongst them, and he did so with the greater pleasure, because they were all aware of the unjust proceedings to which he had been subjected. (Applause.) There was not a single pupil amongst them who did not participate in his sufferings, and rejoice at his liberation, and they felt that they were now called upon, as an act of justice, to support him against the attacks which were made to effect his ruin, and deprive them of his valuable services. They had always found in him the student's friend, and ever anxious to impart to his pupils the result of his experience and professional knowledge; and now that he appeared once

more amongst them, they could not but feel that the attempts which had been made to destroy his character and professional prospects had only served to raise him still higher in their estimation, and that he came from his trial like gold purified. (Loud cheering.) There was one point to which it was necessary briefly to allude. The students had heard that an attempt had been made by his prosecutor to deprive them of his services, and appoint another lecturer in his stead. (Hear, hear.) The pupils of that school were determined not to submit to such a presumptuous dictation, and they felt that such an attempt on the part of any individual was an attack on the profession at large, which that school would resist to the utmost. (Bravo!) They did not mean to dispute that, in a legal point of view, their teacher might not be removed; indeed, they knew that in the Insolvent Debtors' Court it was stated that some person connected with the profession, whose name, however, had not appeared, had offered money for the lectureship, but they would tell that man, whoever he might be, that he was not a teacher for them. (Cheers.) The power of the law might appoint a new lecturer, but no power on earth could induce the students then assembled to receive any other man than their tried and valued friend before them. (Applause.) He would ask, would such an attempt be made in any other profession? Suppose a barrister placed in similar circumstances as their teacher. Let him be dragged from his home, his family, and friends, and confined in a dungeon for a debt that he never incurred, and let him be told that he must give up his practice in a particular court to satisfy that unjust debt—would the members of the law sanction that proceeding? Why, then, should such an attempt be tried in the medical profession, upon one of its most distinguished ornaments? The profession of medicine was at least as useful in its results, and quite as respectable as the profession of the law, and he would tell the man who attempted to try the ex periment, that this was not the place in which it would succeed. (Great cheering.) He was sorry he had so imperfectly expressed the feelings of his fellow pupils, for he knew that they were all animated and earnest in the cause, and felt strongly the base attempt which had been made to foist another teacher upon them. He wished he could describe in his proper colours the individual who had made that attempt, and nothing but the fear of the law of libel prevented him from painting that person to the meeting in his true colours. He should now, as a mere matter of form, propose a resolution which had been agreed to at a late meeting of his fellow students, and which was to this effect:—

"Resolved, that it is the unanimous opinion of the students of this school that the oppressive proceedings to which Dr. Ryan, their esteemed teacher, has been subjected, calls loudly for their support, and hearing that an attempt is about to be made to deprive them of his valuable services, they hereby express their determination not to receive any other lecturer in his place."

The resolution was seconded by Mr. Guy, and carried with loud acclamation.

Mr. Clarke then concluded, by wishing Dr. Ryan long life, health, and happiness, and hoping that he might continue for many years to give his valuable services as lecturer of the Hunterian School.

Dr. Ryan then proceeded to address the students, assuring them that he did so with mingled feelings of pain and satisfaction—pain for the cause which had separated him from his pupils for so long a time, and satisfaction on witnessing the generous outbreak of feeling which had greeted his reappearance amonst them. (Great applause.) It was with extreme regret that circumstances over which he had no control had compelled him to withdraw from the school during the past period of this session, and it was now due to his pupils, to the profession to which he had the honour to belong, and, above all, to his own character and reputation, to state as briefly as he could the circumstances which had caused his separation from them, and he trusted they would all see that he had been the object of a most unjust and oppressive persecution. The Doctor then proceeded to state, that in the year 1832 he started the *Medical and Surgical Journal*, and although the *Lancet* and other works of a similar description were in the field before him, his publication succeeded. Mr. Renshaw, the publisher, was his partner, but that person having interfered with his duties as editor, the parnership was dissolved. Mr. Henderson, another publisher, then agreed to publish the work, and it was agreed between them that the accounts should be settled every two months, but although he admitted that the work was paying well, he could get no account from him. Dr. Hunter Lane then offered a large

sum of money to be let in as a partner in the undertaking, when immediately Mr. Henderson declared that the work was not paying its expenses, upon which he (Dr. Ryan) determined to raise 2,500*l.* upon the property, in shares at 5*l.* each, but still Mr. Henderson refused to furnish any account, and at last said that he (Dr. Ryan) was his debtor to the amount of 1,411*l.* The Doctor then proceeded to show in what manner this sum was attempted to be accounted for. He then offered to settle with Mr. Henderson, but nothing would satisfy him but an arrest. Now if a tradesman felt that he was dealing with a fraudulent creditor, he would be clearly justified in arresting such a person; but surely it was not the custom of respectable tradesmen to throw a man into prison who meant to deal fairly and honourably, and who, moreover, had pressed for a settlement of his account over and over again. (Cries of "Shame, shame.") But, however, such was not the practice of Mr. Henderson, who caused him to be arrested for a supposed debt of 1,000*l.*, although claiming more than 400*l.* besides. Well, then, he had no other resource than to go to prison and try to regain his liberty by means of the Insolvent Debtors' Act. The Doctor then proceeded to state what occurred when he appeared in the Insolvent Debtors' Court, where, amongst other charges, it was attempted to be proved that he had fraudulently made away with property. He was asked if had not omitted to return in his schedule a German Encyclopædia of Medicine in 100 volumes octavo, which book he never possessed, and why?—because such a work was never published. (Hear.) Now as to the concealment of property, he solemnly declared that sooner than do so he would burn all he possessed in the world than subject himself to the degradation of being remanded as a fraudulent insolvent even for a single day. (Cheers.) He should mention, that the whole of his other debts amounted to no more than 130*l.*, and yet he was forced into a dungeon for a supposed debt of 1,411*l.*, for in one week it rose from 900*l.*, to that amount. Finding that he was not likely to get that sum, Mr. Henderson then said that he knew a gentleman who was willing to purchase his professorship in that school for 350*l.*, to which proposal the judge observed, that when the money was paid into court he should know how to dispose of it, for the learned judge knew well that no man could be called upon to sell the profits of his brains. Failing in that also, it was then attempted to be shown that he had landed property in Ireland amounting to 1,000*l.* a-year. Now it did appear that there was a gentleman in Ireland named Michael Ryan, who happened to possess an estate in Ireland of that amount, and accordingly the learned counsel for Mr. Henderson put this question to him, "Now, upon your oath, Sir," said he, "are you not the gentleman who received this property in the year 1805?" Upon my oath, Sir, said I, "I am not; for at the time you mention I was only five years old; but I wish you would prove that I am really the owner of such a nice little estate." (Great laughter.) The Doctor then said, that the Judge was pleased to say that he was fully entitled to his discharge, and that he had acted throughout as an honourable man. (Loud cheering.) Now one word with regard to the publication to which he had more than once referred. It was now published by Mrs. Cox, and instead of losing 14*l.* a-week, according to Mr. Henderson's account, it was actually paying more than its expenses, besides remunerating him as the editor. (Renewed cheering.) The Doctor, after alluding to several other points, thanked his auditory for the attention they had paid him, and assured the students that he should for ever entertain a lively sense of their kindness and attachment.

The students then rose in a body, mounted the seats, and, waving their hats, saluted him with a volly of cheers.

The meeting then dispersed.

DR. RYAN AND THE HUNTERIAN SCHOOL OF MEDICINE.

(From the *Morning Chronicle*, Tuesday, Nov. 8)

A MEETING of the students of the Hunterian School of Medicine took place yesterday at four o'clock, for the purpose of congratulating their professor, Dr. Ryan, on his return to his class.

Mr. Clarke opened the proceedings by assuring the doctor of the satisfaction which his pupils experienced at seeing their able instructor once more amongst them, expressing at the same time the indignation which they all felt against the parties who had endeavoured to persecute him, and deprive them of the benefit of his instruction. Above all, they must express their disgust and contempt for the pretence which had been set up, in the course of proceedings of recent date at the Insolvent Debtor's Court, to deprive Dr. Ryan of his professorship in that institution, and at the same time to

dictate to the pupils whom they should receive as their instructor in his place. This was what they never would submit to, and which the law, even in its harshest forms, could never force upon them. He concluded by moving the following resolution, which was seconded by Mr. Guy, and carried amidst acclamation:—

"That it is the unanimous opinion of the students of the school that the oppressive proceedings to which Dr. Ryan, their valued teacher, has been subjected, call loudly for their support; and hearing that an attempt is about to be made to deprive them of his valuable services, they hereby express their determination not to receive any other lecturer in his place."

Dr. Ryan then rose, evidently much overcome by the cordial feeling manifested by the meeting. He thanked them for their kind and zealous co-operation in his support, and could assure them that after all the anxieties and troubles he had gone through, this would ever be looked back upon by him as the proudest day of his life. He then said that, after what had taken place in the Insolvent Debtor's Court in regard to himself, he felt it to be alike a duty to them, himself, to the profession, and to the public, to come forward and offer the fullest explanation of all the transactions in which he had been concerned with Mr. Henderson in the publication of *The Medical and Surgical Journal*, to show them that it was not and never had been his intention to do any one injustice, to rob any one of their due; but that, on the contrary, he had himself been most unfairly dealt with—debts charged to him which he did not justly owe; and that, in consequence, the only rational course which was left open to him was to act as he had done. The Doctor then entered into a lengthened detail of all the circumstances connected with the publication in question, which, being chiefly of a financial nature, and in themselves but a repetition of the statements made at the Insolvent Debtor's Court last week in his case, and which were fully reported in our paper, we need not now go into them again. He was loudly cheered throughout; and the manner in which his various appeals upon the points of his case were successively received by the meeting showed that there existed but one opinion in their minds as to the perfect integrity, honour, and manly straight-forwardness which had characterised all the proceedings of Dr. Ryan throughout these unpleasant and trying circumstances.

The meeting gave the Doctor three hearty cheers at the conclusion of his address, and then separated.

We shall offer no comment upon these reports, "he who runs may read." It is, however, but right to observe, that neither contains a quarter of Dr. Ryan's address. This was necessary fully to explain to his numerous pupils, gentlemen of education, to his colleagues, to his profession, and to his own character, that his conduct was fair, just, and honorable, and accordant with that of all respectable members of his profession. He felt bound to convince his pupils, who belong almost to every clime, that he had sustained the medical character. He adduced in support of this position, what was not reported in the talented daily journals, the following particulars which appeared in the *Morning Chronicle*.

Thursday, Nov. 4.—*Before Mr. Commissioner Law.—In the Matter of the Petition of Michael Ryan, M. D.*—In this case, which was reported in *The Morning Chronicle* of yesterday, it was stated that the case stood adjourned for Mr. Costello to give up some books belonging to the doctor, to the Court, and to serve Mr. Wakley, M. P., with a notice. In the course of the day,

Mr. Cooke said he held in hand a receipt, signed on the part of Mr. Wakley, for 6*l.* 5*s.*, for advertisements inserted in *The Lancet*. The receipt was signed as of this day.

Mr. Commissioner Law said he supposed a friend of Dr. Ryan's had paid the money.

Mr. Cooke replied that that was the case. The liberation of his client was anxiously required by his friends.

Mr. Woodroffe applied to examine the doctor respecting some information which had been derived after the hearing, relative to property in Ireland. The Court, on an application for a re-hearing, demanded that the information should be acquired subsequently to the discharge, and in this case it had been acquired before the discharge. He therefore hoped the Court would allow the examination.

Mr. Commissioner Law was always anxious to remove any impression on the part of the creditors as to property.

The doctor was then examined by Mr. Woodroffe, respecting the Springfield estate in Ireland. He said he believed there was a contingent interest in the property, but it depended on the lives of many persons: he expected no benefit from that property.

The Court ordered the doctor to make

a statement in his schedule of the property, and his interest derivable from that source.

The statement was accordingly made, and the books having been given up, the doctor prayed that his discharge might issue instanter. He argued that a patient was seriously indisposed, and his attendance was immediately required.

The Learned Commissioner granted the application, and the doctor was declared entitled to the benefit of the Act, and ordered to be discharged forthwith.

Mr. Woodroffe, on the part of Mr. Henderson, applied for the assigneeship.

Mr. Commissioner Law said no assignee could be appointed without the account of Mr. Henderson being audited. The doctor was no doubt anxious to settle the account, as he was likely to come into property, and to remove his proceedings off the files.

The Doctor expressed his anxiety to investigate the account; he doubted every item, and he believed in his "heart and soul" he did not owe Henderson one shilling. He (Henderson) had claimed 1,400*l.*, and arrested him for 1,000*l.* He could prove that notwithstanding the thousand disadvantages he had laboured under in the Fleet, the work had paid itself. It was a most serious thing to him.

Mr. Cooke: Serious indeed! I wonder how the man could have brought his conscience to swear to a debt.

Mr. Woodroffe said he was free to admit that the doctor ought not to have been arrested.

Doctor Ryan said he had no less than six gentlemen present who wanted to address the Court on the hardship of his case; he ought never to have been arrested.

After a lengthened discussion the Learned Commissioner said he should order Mr. Henderson to go before an examiner of the court.

Dr. Ryan had a right by law to retain any books necessary for conducting his Journal, until he appeared before the Court.

What would have been the observation had Dr. R. allowed the Journal to cease, were it beneficial to his detaining creditor?

When every thing failed Henderson, he raised a clerical or technical objection, that Dr. Ryan's attorney had inserted the name of Mr. G. Churchill, the publisher of the Lancet, instead of Mr. Wakley's, M.P., as the proprietor.

This was done to send Dr. R. back to prison, even until next day, to obtain Mr. Wakley's signature.

This was a foolish and absurd proceeding, as Mr. Wakley, Mr. Mills and Mr. Churchill, were incapable of opposing Dr. Ryan. The scheme like every other failed, it was exposed and defeated.

Next comes the "mare's nest" of Dr. Ryan's possessing 1000*l.* a-year in Ireland. It was true that Dr. Ryan's father, as executor to his grandfather, recovered a certain estate, about thirty-one years ago, and Henderson thought that Dr. Ryan had recovered, and was in the receipt of the rents of the property, which are in the possession of the elder branches of his family; and only a small portion may come to him, in the event of the deaths of several individuals, every one of whom, except one, is younger than Dr. Ryan, as he proved in court. The result or effect of this grand discovery was, that the intelligent and learned judge decreed, to protect Dr. Ryan, that the account of the detaining creditor, the considerate, upright, and lenient Mr. Henderson, should be referred to the Examiner of the Court; that the expenses should be paid by the opposing creditor before an assignee was appointed: the literal meaning of which is, that Mr. Henderson, of No. 2, Old Bailey, must legally prove his account, and produce every individual of whom he received, or to whom he paid money, on account of Dr. Ryan's London Medical and Surgical Journal, before one item of it is allowed.

It must be interesting to state what Mr. Henderson has received by his unusual and oppressive proceeding.

The answer is, not a farthing as yet, nor will he, for he will be brought in Dr. Ryan's debt. He must first prove or verify his account, which he refused again and again to do, before he arrested Dr. Ryan. It is perfectly unnecessary to offer a remark upon his conduct as a tradesman. It must be manifest he has gained great reputation by the foregoing mode of proceeding. A discriminating public will doubtlessly award him his deserts.

He acknowledged to have received 2300*l.* and upwards of Dr. Ryan's money for the sale of his Journal; his unsettled account made the expenses 3600*l.* and odd, although the whole expenses for the period he published the Journal, if a single copy had not been sold, would be, according to the evidence of the present publisher and printer, who appeared to verify the fact on oath, about 1200*l.*, and

will verify it before the examiner of the court when called on to do so.

Such is the law of arrest. A professional man is torn from his family, his goods taken away, his wife and children subjected to every inconvenience, himself thrown into prison, where he cannot obtain the means of support, and not a shilling to pay his creditors; he is incarcerated for several weeks for a debt he does not owe, and which his opposing creditor makes at least three times more than the usual amount, as above stated. What will be thought of the law that affords no remedy for such false arrest and imprisonment? All must allow, the sooner arrest for debt is changed the better.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Nov. 5, 1836.

Dr. C. B. Williams, President, in the Chair.

Exposition of Homœopathy.

After the routine business of the Society was transacted, in which the President, Dr. Uwins, Mr. Costello, Mr. Hale Thomson, Mr. Verral, took part, the following temperate and well written exposition of Homœopathy was read by Dr. Bureaud, and commented on by Dr. A. T. Thomson, Mr. Costello and Dr. Addison, and the further discussion of the subject was adjourned to Saturday the 19th inst.

Gentlemen,—When a doctrine has a certain number of partisans in different parts of the world, we must suppose for the honor of mankind, that there is some truth in it, and that those who seek to propagate it, have at least been seduced by an appearance of truth; were we to reject this doctrine without examination, we might justly be accused of prejudice and injustice. Whenever homœopathy is condemned hastily, the homœopathists take advantage of it, and remind us of the fate of Galileo, Harvey, and the oppositions of the ignorant to vaccination; they also bring forward Copernicus, Descartes, Newton, undervalued by their cotemporaries, and placing themselves on the same line with these immortal men. The homœopathists complain of the ignorance of the times, or of the egotism of their opponents, and thus, easily obtain all the honours of persecution. If the discovery of the motion of the earth and the fixity of the sun was not condemned, although it was not consistent with the general notions of astronomy; they ask, why reject homœopathy, which is as important in medicine as Newton and Galileo's discovery.

However presumptuous this assertion may be, the disdain with which homœopathy is treated almost justifies it. In the present times, Gentlemen, it is necessary to make a great noise to attract public attention, is it therefore surprising if homœopathy has so many Galileos and Newtons?

Gentlemen, let us not follow the example of those who condemn homœopathy without seeking to know it; let us look for truth, and if according to the allegory of the ancients, truth resides at the bottom of a well, let us not imitate those weak men who remain on the borders of the well, and deceive themselves, whether they say they have found truth, or whether they deny its existence. Let us then search for truth and exonerate ourselves from the charge of injustice and prejudice which homœopathists so freely lavish on us.

I shall not give a sketch of Hahneman's life, I need only make his opinions known, and to these I shall add a few observations; we shall afterwards draw our consequences. Before Hahneman laid down his system, he denied that all had existed from the time of Hippocrates to the present day, and professed to give birth to the real science of medicine.

Diseases are generally divided into lesions of the organs and disorder in the functions. Homœopathy acknowledges no organic alterations. Hahneman says, that in order to gratify our folly, diseases cannot cease to be dynamic aberrations that *our spiritual life feels*; that is to say *immaterial changes* in ourselves. (Organon, p. 15.)

Gentlemen, we believed a rational and scientific character had been grafted on medicine—in fixing what are the organic lesions left by a disease, which terminates in death, and in discovering the means to prevent it when the symptoms appeared. In other words, in studying the connexion existing between the lesions and the symptoms observed in diseases, we thought with all observers, that where there is stimulus, there is an organization of some sort, there is a material *substratum* whose modifications are manifested by symptoms; perceptions were thought to be material, arising from the action of agents on our bodies: and in the action of these agents we see a cause that could be guarded against.

Homœopathy has denied this fact, and Hahneman says, not only the causes of disease are not material, but that they *cannot be so.* (Organon, p. 16.)

"What quantity of material principle," says he, "must penetrate to produce syphilis, and of the breath of a man suffering from variola, to produce this fatal malady." (Hahneman, op. cit.).

Would not similar statements lead us to believe, that syphilis is caught while we sleep, and without coming in contact with any impure body? Could it not also be supposed that the air, which is so often loaded with impure matter, never penetrates into our lungs, to furnish them with oxygen? And these agents, air or the syphilitic matter, are they not material? must we acknowledge a sort of *aura syphilitica* as an *aura seminalis?*

"Again," Hahneman says, "diseases are not, and cannot be mechanical, or chemical change of the material substance of the body: they do not depend on a morbid material principle; they are merely partial alterations of *dynamic* life." (Organon, 129.)

Therefore, gentlemen, we return towards ontology; diseases are separated from the organs, effects are without cause, and our senses are deceived by the phenomena that take place. It is no longer necessary to study and to learn the influence of modifications, of the agents of nature on each of our organs; life and disease are phenomena independent of the body, and all manifestations are produced in such a manner as the profane cannot yet appreciate. Homœopathists only acknowledge dynamic affections: and although this dynamia is but the representation of material effects, homœopathists still maintain that matter has no share in the manifestations; as they would undoubtedly maintain that the sounds of a harp could not exist without strings, and without fingers to make them vibrate.

This first step of homœopathy in *vitalism,* this return to Vanhelmont's archeus, must necessarily lead to the doctrine of symptoms, and so it happened.

Hahneman says, "that symptoms are the only guide of the physician in the proper means of obtaining the cure of a disease. This external image of an internal disease, must show the means of being acquainted with the necessary remedies." (Organon, page 17.)

In general medicine, symptoms are considered merely as the practitioner's leading-strings which are to conduct him to the origin of the evil. Homœopathists also seem to follow this plan as the symptoms are the image of the essence of the evil, but in their opinion, the essence of the evil is not *material,* the interior substance, which has undergone the morbid alteration, is *invisible,* the change that has taken place in the organism can but be suspected by our intelligence, so that symptoms are the reflective image of an *immaterial, invisible* object.

Hahneman says, "that symptoms are the only things that should attract the physician's attention, in all maladies." (Organon, page 117.)

But, we ask, on what these symptoms are founded? You only admit lesions of the functions, you only acknowledge as symptoms aberrations of sensation, variable in their nature, and variable by all the agents that influence the human organization; and do you not run the risk of being continually in search of an ever-changing disease: is it not the Danaides tub, that could not be filled. In general medicine, symptoms lead us to some *determinate point;* from symptoms *we go to organs,* we then compare their healthy and unhealthy state; we remark their different modifications; and when we understand them, we seek to bring them to their normal type.

In homœopathy, attention is paid only to the phenomena of sensibility and pain, and dependence is wholly placed on the patient's account of his symptoms.

In general medicine, we derive assistance from the patient's account, but the material state of the organs is our principal guide. 'Tis not the cough, and expectoration, and pain, alone, that indicates the state of pneumonia, but osculation, which enables us to judge the material state of the lungs.

But let us now inquire how homœopathists act when the symptoms of an existing evil are not evident. When an individual is bitten by a mad dog, will they prevent the wound being cauterized, when there are no other means of stopping the progress of the virus? Is there no disease because there is no symptom? and will they wait till the patient is attacked with the dreadful convulsions attendant on this fearful disease, to administer a quadrillioneth part of a grain of belladona, of hyoscyamus, or stramonium? Can it then be said that the *tolle causam* of ancient medicine is a chimera? that the disease in this case, as in a thousand others, is but a dynamy aberration of *our spiritual life?* Will homœopathists then assert that they have

not seen the cause, as they say they have not seen Vanhelmont's thorn? Will they then inquire what quantity of rabid virus has been absorbed, in the same manner as they ask what quantity of syphilitic virus has penetrated?

Hahneman again says, "that all the experiments in the world could not prove, that when once the symptoms of a disease are cured there remains but health, and that the morbid changes operating in the interior of the body, have not been annihilated."—(Organ. p. 118).

If the followers of Hahneman adopted the modern symptomatology, this last assertion of theirs would have remained unnoticed; but when their symptomatology, founded on the functions, abstracts the organs, can we avoid reproaching the homœopathists with depriving themselves of the admirable means and discoveries of the moderns.

In pneumonia, when the cough and expectoration have ceased, and the oppression on the chest is relieved, or even removed, can we say the disease is at an end while we hear a crepitating râle, and, by the aid of auscultation, are aware of the diseased state of the lungs?

If a patient complain of pain in the bladder, and that this pain extends to the extremity of the penis, and if there be a small stone in the neck of the bladder, and a homœopathic dose be administered, and that from any exertion or position in lying down, the stone again falls into the bladder, and all symptoms disappear, can it be said that the disease is cured, because the symptoms are no longer apparent; can the stone be called a dynamic aberration of our *spiritual life?* and will it be asked what the stone weighs, in order to discover a chemical change in the material substance of the body, can this, I ask, be called a dynamic alteration of life, without material morbid principle? I leave my learned friend, Mr. Costello, to decide this point.

But let us proceed. The homœopathists began by rejecting the study of causes; they assert that man knows not the primitive cause of any thing, he only sees effects and symptoms; and as these are the image of the disease, or of the morbid, imperceptible, and spiritual essence, all other inquiries are useless. But yet, in dividing maladies into acute and chronic, Hahneman forgets what he has already said on causes.

Hahneman divides acute diseases in "two categories, most of them depend on a passing affection, a *psore latente*, which falls into a state of stupor when the chronic disease is not too violent; others depend on meteoric and telluric influence, which cause epidemy."—(Organon, p. 179).

Hahneman, from the beginning of his book, rejects the study of causes as useless and powerless in bringing on a result; he then acknowledges that acute diseases are often produced by a latent *psora*:—but let us hear his observations on chronic diseases.

"The miasms causing chronic diseases," says Hahneman, "are syphilis, sycone, and the itch. The itch," he tells us, "is the only real, fundamental, and productive cause of all the morbid forms known by the names of weakness, nervousness, hysteria, hypochondria, mania, melancholy, epilepsy, spasms of all kinds, rickets, caries, cancer, fungus hæmatodes, gout, hemorrhoids, jaundice, cyanosis, dropsy, amenorrhea, gastrorrhagy, asthenia, sterility, cataract, gravel, paralysis, and pains of all kinds, &c. &c."—(Org. p. 183.

Such is the immense catalogue of diseases of which the cause is revealed by this great reformer, who, in the first instance, only believed in symptoms; and we must observe, that he ends the list by saying pains of all kinds, &c. &c. This reminds us forcibly of a noted quack, who boasted of being known in the *whole universe and a thousand other places.*

We must bear in mind, gentlemen, that when we are called to attend ladies who have slight nervous attacks, that they are caused by the itch; for Hahneman asserts that that would be no spleen, no hysteria, without the existence of the itch, which the fair sex so dexterously conceal by the aid of cosmetics.

But, putting aside what may appear ridiculous in Hahneman's opinion on the causes of the various diseases here mentioned, I must inform you that Hahneman says he spent twelve years in searching for the source of those numerous chronic affections that had remained unknown to his predecessors and his contemporaries.

But notwithstanding the discovery of this great source, Hahneman still maintains, that all diseases are *invidualities;* thus, at one time he rejects the knowledge of causes as wholly useless, then he admits having spent twelve years in seeking *causes*, at the end of which time he discovers that the itch is the cause of nearly all the evils that assail humanity; the common mother of chronic diseases;

and yet he maintains their speciality. We cannot be blind to so many contradictions. I submit them, gentlemen, to your own judgments.

You will not be more satisfied with what is to be learnt on the progress of disease, this rapid operation of the vital strength loosing its *rhythm*. According to Hahneman this progress should never be arrested. It is the extreme of ignorance to think of curing pneumonia by bleeding; for the rapid operation of vital strength would in most cases cease unaided; but it might also overpower the *vis medicatrix naturæ*, for it is a general rule that strength overpowers weakness. Instead, therefore, of arresting the operation of the vital force, which Hahneman terms blind and vulgar nature, his great discovery is to *increase* it by artificial means, by an analogous and artificial disease, as nearly as possible resembling the original one.

According to Hahneman, all the cures that have taken place from the time of Hippocrates to the present day, have only been effected because ignorant physicians who have by chance administered homœopathic medicines.

The application of this homœopathic principle may perhaps cause some degree of fear gentlemen; for when the cup is full to the brim, one single drop will make it overflow. When the blood-vessels are full, turgid, and enlarged, the slightest increase may make them burst, and cause apoplexy: an aneurism may also break. A tuberculous matter in progress to softening by a new artificial increase, may sooner soften; a mucous membrane highly inflamed, may become ulcerated; yet there is nothing to fear. These diseases depend on miasm, on the itch, and the increase of blood may take place without causing *instantaneous death*, as says an homœopathist. And, indeed, if the patient die only a few days after, is homœopathy more guilty than when it does not cause instantaneous death?

But let us proceed to the doctrine of Hahneman's theurapeutic. What strikes us most, gentlemen, is the infinite divisibility of the medicinal doses, they must indeed be weak, as they are to produce an increase of the disease, and rather than render this increase mortal, Hahneman would have preferred dividing his doses into almost imperceptible atoms, until he had deprived them of their medicinal power. Hahneman tries his medicines on healthy subjects, this reminds us of a surgeon, without patients, who endeavoured at night to break people's legs, in order that he might be called to attend them on the following day.

Is it to be supposed, gentlemen, that medicine acts on the healthy as on the sick? this point at least admits of a doubt. May not the healthy digest or absorb a medicine without its taking any effect on a strong organization; experiments therefore on healthy subjects, with a view to judge of their effect on the sick are as subject to error as the experiments on animals as regards man, but let us now imagine how these medicines are prepared. One drop of tincture of aconite is mixed with a hundred drops of spirits of wine, one of these drops is again mixed with a thousand drops of spirits of wine, then one of these thousand drops is again mixed with ten thousand more drops, can it then be ascertained what portion of aconite one of these last drops may contain. I am aware that bodies are divisible to an infinite degree, but let us take a drop of any thing highly coloured and mix it homeopathically to see if the least colour remain. One of these thousand drops is poured on a hundred grains of *saccharum lactis*, and one of these little grains is the homeopathic medicine, said to contain more power than all the allopathic remedies.

I need not call your attention to the fact that we are to believe this particle goes into the stomach and digestive organs without being decomposed, and like a letter put into the post, will go through all the complications of the economy to the very place to which it is directed; this thousandth part of a drop, this infinitesimal dose will insinuate itself into the organization, pass through all the material molecules of the tissues and the fluids, and reach the point where the immaterial disease lies, and give battle in a fibre to the imperceptible disease; we must also admit, gentlemen, that nothing is to destroy the effect of the globule, but how can we believe this, when we know that the smallest emanation in an apartment can destroy the effect of an homeopathic pill. Dr. Brachet, of Lyons, relates that a lady consulted an homeopathist for some indisposition or other, and though the usual doses were administered, there was no change for the better in the patient during eight or ten days; the homeopathist was quite at a loss to conceive what could occasion resistance to his powerful grains, and making a very

early call on his patient, he found the servant sweeping the room; stop, stop, he exclaimed, what is that I see before me, then taking from the dust a bunch of faded violets, "where did these come from," said he, "from my lady's room," answered the servant, this, said he is the cause of the failure of my pills, and he indignantly threw the withered nosegay out of the window.

I had nearly finished this slight sketch of Hahneman's doctrine without mentioning *specificity*. According to Hahneman, all diseases being individualities, all medicines must be *specific;* but the pathogenia power of medicine is hardly sketched; the theurapeutic pathogenia is in its childhood. Yet, if the homeopathists persevere, no human memory however vast, could embrace all these specifics, and retain the images of all these diseases, unless an automatic machine be invented capable of applying a specific grain on an individual with mathematical precision.

Such, gentlemen, is the homœopathic doctrine of Hahneman. But what changes in a few years—*quantum mutatur ab illo:* something more has been added to the great discovery, like a parasite being; the isopathy—are you acquainted with isopathy, gentlemen? are you aware that it is the application of virus as a remedy? Thus the virus poison of the serpent, the virus of a mad dog, the venom of a toad, have been studied and administered homœopathically. *L'autopsorine* is another grand discovery: it consists in giving to each patient some of his own virus in homœopathic doses; they are applied as remedies for the itch, the phthsine, the varioline, the vaccinine, the antraxine, the leucorine, the cancerine, syphiline. If a child has the ring-worm, some of the matter is mixed with sugar, and given in pills to the patient homœopathically; after a first operation for the stone, the incised part is treated with a little pulverised stone, mixed with sugar, and administered to the patient. When a person has the itch, some of matter is taken, mixed with sugar, and shaken, and given in pills. Such absurdities can scarcely be credited; and what are we to conclude, when we know that homœopathy is practised, not in the lower classes of society, where itch prevails, but in the fashionable world?

I am ready to prove all I have here advanced. I have studied homœopathy, and can discuss it conscientiously. Stupidity, ignorance, and fashion had opened a brilliant career for those who chose to follow it; but I could never make up my mind to trifle with my patients' health.

If it be asked, what inducement there is to follow this doctrine, I shall answer, that, for upright practitioners, it is the *similia similibus* of Hippocrates, in which there is some truth; but if I grant this, I do not grant that Hippocrates prescribed by a thousandth part of a grain; and when his successors treated the spasmodic vomiting by an emetic, it was certainly not an homœopathic dose. If, according to Hahneman, all the cures have been only effected by the law *similia similibus*, can it be said that infinitesimal and imperceptible doses were given? What causes this system to be adopted, is a superficial observation, idleness, or interest, and perhaps the itch, which weakens the mental faculties. The continual answer of the homœopathist is as follows: *do not reason, but make experiments.* Well, be it so; and that my own experiments, which led me to give up the system, to *psoric* minds may not be rejected, I beg leave to give the result of trials made by two eminent men of undoubted probity and talent.

An account of the Homœopathic Experiments made at the Hotel Dieu, at Lyons, by M. Guerard, the Homœopathist; given by Dr. Pointe, Physician to the Hotel Dieu.

Sir,—In a letter Dr. Jaeger wrote to you on the 25th of August, he complains that medical practitioners will not take the trouble to verify the facts of Hahneman's doctrine by clinical experiments. Reproaches of a similar kind are made by homœopathists in this town, and we do not wish them to pass unnoticed.

We are certainly authorized not to verify the facts of a doctrine founded on principles contrary to the fundamental truths, and axioms of acknowledged science; but as practitioners we may perhaps be called upon to enlighten a public so easily deceived by false doctrines. Feeling as a medical man that I owe a duty to the public, I am anxious to make known some experiments made in the wards of this hospital before numerous witnesses, by an individual anxious to succeed, who was placed by me in a situation which precluded the possibility of deceiving either himself or others.

In 1832, M. Guerard, the most celebrated homœopathic doctor in this town, was admitted into a ward containing thirty patients, with liberty to choose what cases he thought best adapted to

prove the success of the Hahneman medical doctrine. The only condition required was that his visits should be made at stated hours, of which previous notice was to be given, in order that any one might be at liberty to assist at them. Fifteen acute and chronic diseases (fever, pneumonia, erysipelas, pulmonary catarrh, measles, icterus, diabetes), were chosen by Dr. Guerard; and every day, in the presence of sixty pupils and several practitioners of this town, he administered the homœopathic doses, and prescribed the regimen. These experiments lasted seventeen days, after which Dr. Guerard voluntarily withdrew. During the seventeen days no advantageous result, no amendment that could be ascribed to the homœopathic method was observed even by Dr. Guerard himself; and three times during the course of these experiments he found the necessity of departing from the Hahnemannic doctrine. The house-doctor twice took upon himself to save a patient labouring under pneumonia, whose case peremptorily required loss of blood. He made use of the lancet, instead of an homœopathic dose of aconite.

Such is the result of the experiments made at the Hôtel Dieu at Lyons. They admit of no doubt. The witnesses were numerous and competent. Dr. Guerard attributed the failure of a method he had hitherto invariably found successful to the action of the deleterious vapours always prevalent in hospitals, and from which he could not preserve his patients. What then is the power of a method which fails precisely where it might be called on to render the greatest services, and where the ancient doctrines have the most marked success? The homœopathists have blamed Dr. Guerard for making public experiments injurious to their doctrine; but our opinion on the subject is not altered.

Opinion of Dr. Andral, Professor of Medicine at the Faculty of Paris.—(He speaks in presence of the Academy.)—It is unjustifiable, says M. Andral, to subject humanity to doubtful and variable remedies; a physician may make experiments, for if the new remedy fails, he has immediate recourse to another. To admit that *all* is possible, is to admit what is absurd, and thus open a career to the most deplorable divagations. But let us judge from experience. I have one hundred and forty facts, taken with the most scrupulous exactitude, and relating to the value of homœopathic remedies employed, and taken from M. Guibourt's Pharmacy; and with regard to regimen I scrupulously followed Hahneman's precepts. My experiments are at least as exact as those made in town by the homœopathists. I wished to ascertain, first, whether the remedies can produce artificial maladies; and I took the most heroic remedy, *bark*. If this remedy does not produce intermittent fever, it is evident that the doctrine is overthrown.

Ten other persons and myself took bark in all shapes and all doses, from an homœopathic atom to an allopatic dose. Not one of us had the slightest degree of fever. Those whose stomachs were irritable, felt the effects of the strong doses, but not the slightest degree of fever, although it might have been thus qualified by ignorance; but we are too well acquainted with intermittent fever to mistake its nature. Aconite which is considered by homœopathists as equivalent to bleeding, was subjected to the same trials, but produced no inflammatory fever; neither did sulphur engender the itch, nor *arnica* cause dumb pains. It must be remembered that the symptoms of medicine in Hahneman's observations are the same for *all*, which renders his therapeutics a complete chaos.

My experiments were made during twelve months with the most scrupulous attention. This part of homœopathy has therefore been proved invalid.

Have homœopathic doses the power of effecting cures? I have solved this important problem with equal care and perseverance, and the globules of Hahneman never removed an intermittent fever; yet this fever is generally cured by suitable doses of bark. In a thousand inflammatory cases, globules of aconite have had no effect, any more than atoms of mercury in syphilis, which was afterwards cured in the usual manner. Bryony, colchicum, have failed in removing rheumatism; aconite, belladonna, equally useless in pneumonia, or at least in symptoms, for Hahneman merely notices symptoms; in short, considerable experience compels me to state, that homœopathy is a system completely illusive.

Gentlemen,—The opinions I have just read from two eminent physicians appear to me quite conclusive; and I shall now only beg to add, that the observations I have made are meant to be purely scientific, and I should much regret if they could give rise to any personality whatever.

MEDICAL JURISPRUDENCE.

THE following accounts of coroners' inquests clearly show the necessity of medical reform. We dare not, as the libel law exists, comment upon them; but every one of our educated readers will form a correct conclusion.

Yesterday evening (Nov. 7th), an inquest was held before Mr. Stirling, coroner, and a highly respectable jury, at the sign of the Grapes, Brompton-road, on view of the body of Mr. John Hammond Jones, aged 43 years, an artist of some celebrity, residing in Brompton-row, Knightsbridge, who died under the following lamentable circumstances:—

The jury having been sworn, the following evidence was taken:—

Matilda Besser sworn.—Is niece of the deceased, who was a married man, and resided at his house. Deceased had latterly enjoyed a good state of health, with the exception of suffering from rheumatism, for which he took laudanum. On Saturday morning last, about 7 o'clock, was called up by Mrs. Jones to see deceased, who she said was very ill. Witness found deceased lying on the bed, and very drowsy, but perfectly sensible. Mrs. Jones then showed witness a phial marked "Laudanum, poison," which she said she had found in the kitchen. It was sent by Miss Jones to the shop of Mr. M'Manus, a surgeon, a few doors off, who sent word he had sold deceased a great deal too much, and he hoped he had not taken it all. He also sent a draught, which was given him immediately. In about half an hour afterwards Mr. M'Manus was again sent to, with a request that he would come to see deceased; but he sent his shopman with another draught which he gave him. He then ordered him strong coffee, after which he vomited a little. The shopman then left, upon which Mr. M'Manus was again sent to, when he ordered as much tea and hot water to be given the deceased as possible, and that he should be kept roused, which was done. In the evening Mr. M'Manus himself came, and desired tea to be continually given him. During the evening he again attended, accompanied by his shopman, when they ordered some strong vinegar and water to be administered to the deceased, but it instantly came off his stomach, without being mixed with the laudanum. Finding he did not get better, Mr. Glenn was sent for, who came about half-past 12 on Sunday morning. He brought his stomach-pump, but finding deceased was rational, and so many hours having elapsed since deceased had taken the poison, he did not use it. He, however, ordered him a dose of castor oil, which was administered, but did not take effect. About 7 o'clock that morning deceased appeared to be so much exhausted as to be unable to stand, when he was laid on the bed, and died in about two minutes afterwards.

By a juror.—Mr. M'Manus, while attending deceased, asked him if he did not consider he had acted very wrong in purchasing so large a quantity of laudanum, and under the pretence of its being for a lady in his house. Deceased replied, perhaps he had acted wrong, and was sorry for it. Deceased came home about a quarter-past 12 o'clock on Friday night, very much intoxicated, and went down into the kitchen, where he must have swallowed the poison. The bottle was a two-ounce bottle, and in witness's opinion must have been full. Deceased appeared to be very anxious to live. Mr. M'Manus did not consider the use of the stomach-pump needful.

The evidence given by Mr. M'Manus and his assistant corroborated this, and the coroner in summing said that he considered that the deceased, who, it appeared from the evidence given by the last witnesses, was intoxicated at the time he took the poison, had, when he swallowed the laudanum, forgotten the quantity he had purchased; and added, that, in his opinion, the surgeon had, by the questions he had put to the deceased previous to seeing him, used proper caution.

Verdict.—"That the deceased died from the effects of laudanum, taken while in a state of temporary derangement."

The following case is replete with interest to every medical practitioner, as it proves how many attempts may be made by an individual to destroy his existence.

Yesterday (Nov. 7th), at 1 o'clock, an inquest, which did not terminate until the evening, was held before Mr. W. Carter, coroner for Surrey, at the sign of the Waterloo Arms, George-street, Camberwell, upon the body of William Henry Blake, aged 19 years, who, in order to commit suicide, swallowed upwards of half an ounce of arsenic, afterwards opened a vein in the left arm, and subsequently hanged himself. The deceased was the son of a respectable tradesman residing in Camberwell, but did not live with his father; and the only cause which can be assigned for committing such an extraordinary and resolute act of suicide is his

having formed a very ardent attachment to a young female living as housemaid in the service of Mr. Arnold, a surgeon, residing in Camden-row, Peckham. Upon the return of the jury from viewing the body, which lay in a coffin at No. 24, Waterloo-street, the coroner took the following evidence:—

John Morgan, a gardener, deposed, that he lodged at No. 24, Waterloo-street, and had known the deceased from his infancy. His parents were highly respectable, and he had two uncles in independent circumstances residing at Brighton. About a month since the deceased went to Brighton, and he did not return until Thursday night last, after witness had retired to bed. The deceased, when out of a situation, lodged with witness, and slept in the same room. He undressed himself on the night in question, and got into bed, but immediately after was seized with a violent vomiting fit, and was obliged to get out again. He appeared very ill, but witness considered that he might have been drinking, and that the sickness was the effect of the liquor. Upon witness getting up in the morning, he (witness asked him how he was? and he replied, "I think a little better." Witness at that time had no idea that he had taken poison. At 8 o'clock witness went to the deceased's mother's to breakfast; and upon inquiring after him, Mrs. Blake said that she had not seen him, and was not aware that he had returned from Brighton. She immediately went to see after him, but had not been gone above ten minutes, when she returned, and said that she had knocked several times at the bed-room door, but could get no reply, and that the door was locked. Witness then went, and after knocking and calling several times to the deceased, and receiving no answer, procured a ladder, entered the room at the window, and discovered the deceased hanging; his neckerchief was tied tightly round his neck, and fastened to the railing of the bedstead. The limbs were drawn together, and the feet within an inch of the floor. Witness cut the body down, and upon doing so, found a deep incision upon the bend of the left arm, but the blood had ceased flowing. There was an earthen pan near the bed, containing about a pint of blood, and a razor belonging to witness, the end of which was stained with blood, was found upon the chimney-piece. From the appearances about the room, he must have held his arm over the pan to bleed.

Heath, the beadle, stated, that the young woman referred to had told him that the deceased called upon her very late, and she was so busily employed that she could not attend to him. This circumstance, no doubt, preyed greatly upon his mind. On Friday morning she heard of the catastrophe, and went to see the body, when she fainted away, and had kept her bed ever since.

After some consultation, the jury returned a verdict "That the deceased had destroyed himself, but as to the state of mind he was in at the time, there had not been sufficient evidence for them to determine on."

The Coroner granted his warrant for the interment of the body.

UNIVERSITY OF LONDON, NOV. 1.

Session of Council.—The Right Honourable Lord Brougham in the Chair. His lordship communicated to the Council that Mrs. Mary Flaherty, of Mansion-house, Hammersmith, desires it to be intimated that she intends to place at the disposal of the Council 5000*l.* three-and-a-half per cents. for the benefit of the University, out of zeal for the diffusion of knowledge, and the advancement of civil and religious liberty; and in the firm conviction that this cause, which is, and ever has been, nearest her heart, will in the end be triumphant.

University of London, Session of Council, Nov. 1.

The Right Hon. Lord Brougham in the chair.

Resolved—That the Council most respectfully and thankfully acknowledge the communication made from Mrs. Mary Flaherty, and desire to express, on behalf of the University of London, their deep sense of her extraordinary munificence, and to assure her that her gift will be carefully applied in the manner which they deem the most effectual for furthering the great objects of the Institution.

BROUGHAM, Chairman.

London University, Nov. 1.

Madam,—I have the honour to enclose the resolution of the Council, unanimously passed at their meeting this day.

I have the honour to be,
Your obedient servant,
BROUGHAM.

Mrs. Mary. Flaherty.

TO THE EDITOR OF THE LONDON MEDICAL AND SURGICAL JOURNAL.

SIR—I have only become a reader of late, of your invaluable and useful publication, and it is one, I assure you, for which I entertain the highest respect, and have no doubt but I will be joined by every candid-minded man in admiring the fine tone of manly independence in which it is conducted. Finding you always ready to give a place in your columns for any thing that may tend to instruct or advantage your readers, I send you a few further remarks on medical reform, which has beed lately introduced into parliament by Mr. S. O'Brien, who said he had been requested by several medical gentlemen to suggest to the noble lord, the secretary for Ireland, the propriety of doing away the monopoly which existed in favour of the licentiates of the College of Surgeons in Dublin. He thought it most unfair, that the licentiates of the colleges of Edinburgh and London should not be eligible to fill the situations of surgeons to county infirmaries in Ireland.

The Chancellor of the Exchequer said he thought the present monopoly quite indefensible, and it ought to be remedied. In fact, it was already frequently violated in practice, because the candidates were not duly qualified.

Mr. Wakley said that there was no law or practice to prevent Irish surgeons from practising in England. The fact was, that the surgeons educated in Edinburgh and London were far superior to those educated in Dublin. One of the most disgraceful monopolies in Europe was the College of Surgeons in Dublin, and the evidence taken before the committee last year proved it. He thought it most unfair, by this odious monopoly to limit the choice of the subscribers to the infirmaries to a person educated at a particular place; and I am sorry to say the clause is still the same, that no surgeon can be appointed to a county infirmary who is not a member of the College of Surgeons in Dublin, excluding all members both of London and Edinburgh, which is an unfair monopoly. It is much to be regretted that the work of salutary reform thus commenced in this part of the united kingdom, should be interrupted by our Irish members in the House, who are aware of the existing monopoly in favour of members of their own college, seek, from interested motives, to perpetuate and aggravate them, by bringing those very causes into more effective operation than hitherto, and all in the name of *medical* reform. We will now dismiss this subject for the present, and we will feel bound to say, that we will not make the pages of your journal the medium of any further remarks on existing grievances. Those who differ from us must find some other channel for the publication of their sentiments. I will continue, as a licentiate of the College of Surgeons, Edinburgh, honestly to state my opinion, and fearlessly to answer any objection that may be made with respect to the Hall of Edinburgh. These objections must be presented to the medical profession through the pages of your widely-circulated journal, and trust I will be joined by all members of both London and Edinburgh colleges, to have our grievances redressed, and to petition parliament next session, on the propriety of doing away the monopoly which still exists in favour of the licentiates of the College of Surgeons in Dublin.

Asdagh Glebe,
Co. Cavan,
Ireland.

I remain, Gentlemen,
Your much obliged
ROBERT STEVENSON.

PUBLIC MEDICAL REPORT IN IRELAND.

(Concluded from page 320.)

The Income is derived from the counties of the district, through an order from the Lord Lieutenant; the produce of the land attached likewise goes towards the support of the patients, but as yet no estimation of its value appears in the accounts.

Every item of expenditure seems to be regularly entered; there should, however, be annually made up and published a statement of the expense per head per annum, calculated from the average number of patients in the asylum during the preceding year, apportioned under the heads of *salary, clothing, food,* by means of which the expenses of various asylums may be easily compared and checked; or to make this department as available as possible for other institutions, a table of expenditure, as underneath, might be made out, in a form similar to the one subjoined.

The following very sensible letter has been addressed to Lord Morpeth, the Secretary of State for Ireland, by Dr. Corrie, the Government associate of the late Dr. Barry, which is calculated to make a deep impression upon the enlightened Peer to whom it is addressed, and through him upon the present govern-

ment of this country, in behalf of the unfortunate lunatics in the sister country. Dr Corrie contrasts the state of the unhappy creatures with those in England and France, and places much important information before the noble Lord whom he addresses, which cannot fail to lead to much improvement in our lunacy laws.

May, 1836.

My Lord,

Understanding that it is intended to adopt some measures immediately, relative to the District Lunatic Asylums in Ireland, I take the liberty of submitting to your Lordship a few observations respecting them. Having inspected seven of these establishments, in conjunction with the late Sir David Barry, in the year 1834, having previously visited some of the most celebrated institutions of the same description in France and Germany, and having recently examined some of those in this country which deservedly enjoy a high reputation,—I may possibly be able to suggest some improvements in the system hitherto pursued in Ireland.

I presume the object proposed by these establishments is, to afford to pauper lunatics all the relief of which their several cases may admit, and to do this in the manner most beneficial to the patient and most advantageous to the public. Hence—

1. The original expenditure in the purchase of the ground, and in the erection of the buildings, should be the smallest compatible with the attainment of these great objects.

2. The medical arrangements, while they are the most beneficial that can be obtained for the patients, should be so framed as may best promote the improvement of our knowledge of the nature of various forms of mental disease, and of the most successful methods of treatment.

3. The registry of the patients, and the mode of arranging all the items of expenditure, should be such as may best enable a competent person to judge of the economical management of the institution.

First, with regard to the original expenditure in Ireland, it appears to me to have been an error, (and, if so, it has been a very expensive one) to prefer many small asylums to a few large ones. The nine District Asylums have cost upwards of £200,000, and afford accommodation to not quite 1000 patients. If this number had been placed, as in my judgment it ought to have been, in two, or at most three buildings, not only so great an original expenditure would not have been incurred, but the annual expenditure would likewise have been much less from the smaller number of principal officers.

Secondly, when the asylums are small the salaries of these principal officers form a very considerable portion of the whole annual expenditure, and the average expense per patient in salaries is thus necessarily high, though the salary be reduced as low as it decently can be; but in a large asylum the average per patient is small, a handsome salary may consequently be properly afforded, and the situation rendered worth the acceptance of the best educated professional men. The chief resident officer may then be a medical man, be required to reside constantly on the spot, and devote his whole time and attention to the patients in the institution. He will then have an ample field and a powerful motive for careful and discriminative observation, and the best means of making valuable additions to a most interesting department of medical science. Those only who are well acquainted with the present mode of obtaining medical knowledge, can fully appreciate the high value of information derived from a regular record of every case, drawn up from personal inspection by and accomplished medical officer. In all the French medical institutions this department is esteemed of the very highest importance, and much of the most valuable medical information we possess is furnished by these records. By means of these Lunatic Asylums, Ireland affords opportunity for investigating the nature of insanity, not surpassed in any part of Europe, and this ample field, though hitherto comparatively unproductive, will, under proper management, yield the most valuable fruits.

Thirdly, with regard to the numerical register of patients, and the arrangement of the items of expenditure.

In the year 1834 it was not possible, either from the numerical register of patients or from the manner in which the accounts were drawn up, to judge of the economical management of any one of the seven asylums inspected by Sir David Barry and myself. It had not been customary to calculate averages; and the expense of one patient per diem or per annum, in any particular, such as food, clothing, salaries, &c. could not be given. There was no statement of the average number of patients in the house during

the year, and, unless that number is carefully calculated, it is quite impossible to judge respecting the proper administration of the funds of an institution.

In March, 1836, returns were made to the House of Commons, on a motion of Sir R. A. Ferguson, relative to these asylums; a slight inspection of which will show how little the nature and value of averages are understood.

Having presumed to offer these remarks on the system upon which the District Lunatic Asylums in Ireland have been established and conducted, I proceed to consider what, under actual circumstances, are some of the practical measures most proper to be adopted.

The nine asylums are built, the 200,000*l.* is expended, they have received all the patients they are calculated to accommodate, and there are, probably, at this moment 1,500 pauper lunatics dispersed over the country, or crowded into the houses of industry, who are most proper objects of admission into the District Asylums.

To meet these claims, I would recommend that four or five of the present asylums be enlarged to such an extent as to admit the additional applicants. The necessary buildings may be of the plainest and most economical description, and those asylums may be selected for enlargement which are recommended by the salubrity of their situation or other local circumstances. On this plan no additional number of chief officers will be required, and the appointments may be such as to command the services of able and distinguished medical men.

I am aware of but two objections to this plan. It may be said that where the patients are numerous they are not likely to be carefully attended to. Of course they must not be too numerous; but from 300 to 400 may be advantageously placed in the same asylum, and the best establishments in England and at Paris contain a larger number.

Secondly, it may be urged, that the fewer the asylums the greater, on the average, must be the distance from which the patients must be removed; but while this objection has fatal force when applied to Infirmaries it has little force in the case of Lunatic Asylums. There is rarely the same call for instantaneous assistance—there is not the same danger from motion—there is not the constant change of patients; most continue under treatment for a considerable time, many unhappily for life. Sudden attacks of mania must, for a time, be committed to local practitioners; but in most cases, in 24 or 48 hours, may be conveyed to a District Asylum.

For fuller remarks on these asylums, I beg to refer to the Report on the Medical Charities of Ireland, delivered in by Sir David Barry and myself to the Commissioners of Irish Poor Enquiry, and printed in the Appendix to their Report. I have ventured to make these few observations from the interest I feel in these Institutions, and from my persuasion that the Lunatic Asylums, in particular, may easily be so conducted as not only to render the most important service to the unfortunate persons for whose especial benefit they have been established, but to aid in a very material degree the progress of medical science, and afford the best models for general imitation.

I have the honour to remain,
My Lord,
Your Lordship's most obedient Servant,
J. R. CORRIE."

Dr. Corrie is entitled to great praise for the ability and philanthrophy displayed in this report of the public charitable institutions in Ireland, and in contrasting with those in this section of the United Kingdom. He has shown discrimination and judgment in comparing the state of both with those of France; and it affords us much pleasure in placing the following account of the progress and treatment of insanity in the latter country before our readers.

"The average expense per annum of one bed in an hospital in Ireland, as taken from Mr. Phelan's table, No. V, is 21*l.* 15*s.* 9*d.*; that taken from the table attached to this Report of the Board of Health for 1831 is 21*l.* 2*s.* 7*d.* nearly. I prefer the latter, as I think there is a slight error in Mr. Phelan's table.

The daily average number of persons in the Birmingham Workhouse, was in 1835, 363, including lunatics and sick. The diet includes meat three times a week, and soup, the produce of meat, twice a week. The sick are supplied with every delicacy in meat, pudding, wine, spirits, &c. at the order of the surgeons. The daily expense per head is a very small fraction more than 4*d.*—(Omitted at page 24.)

As mentioned in the text, we calculated the average expense per patient in medicine at dispensaries, whenever we believed we had accurately obtained the requisite data, the following are the results:—

	s.	d.
Ahascragh Diapensary . .	0	6
Ballygar	0	3½
Headford	0	2¾
Forkhill	0	6½
Loughgall	0	7
Markethill	0	4½
Meigh and Jonesborough .	0	3¼
Mullaglass	1	1
Temdaragee	0	6¾
Tynan	1	3½
Cavan	0	4
Castlewellan	0	4¾
Dromore	0	8½
Hillsborough	0	4¾
Holywood	0	2
Rathfryland	2	6
Rosstrevor	1	6
Caledon	0	3¼

We are convinced that the preceding reports will confer great benefits on a multitude of our poorer afflicted fellow creatures. On this account we gave them more space than some of our readers may have thought necessary. But a little sober reflection will convince them of the cogency of our opinion. They, like ourselves, are actuatedby the same motives, the amelioration of the conditions of all members of the human family, of whatever country, caste or condition. This is the opinion which has led us to place the preceding valuable report in our pages.

In our opinion, Dr. Corrie is entitled to no small degree of praise, for the honourable manner in which he has executed the laborious task which he undertook, and the mode in which he has executed it deserves the highest commendation.

Note.—I have stated in the foregoing pages that full and accurate histories are taken of all the cases admitted into the Hospitals and Asylums of France, and that great improvements in the treatment of disease have of late years been introduced. From time to time reports are made, and I here give a translation of one published in 1834, on the Asylum at the Bicêtre, which contains between 700 and 800 lunatics. A careful consideration of it cannot fail to be highly gratifying to all friends of humanity, and will convince the most sceptical of the great advantages likely to be derived from the adoption of a system which shall ensure the publication of similar reports, on one and the same plan, from all the District Lunatic Asylums in Ireland.

The Report is drawn up by Monsieur G. Ferrus, the able Physician to the Hospital of the Bicêtre.

*** "On referring to the first years in which the administration paid much attention to the statistics of the Lunatic Asylums of Paris, it will be found that there has always been an increase in the numbers admitted. The following are the numbers of maniacs, idiots, and epileptics, whom, at various periods since 1801, the Bicêtre has contained under the general denomination of lunatics.

1st of January,	1801 . . .	337
ditto	ditto, 1811 . . .	562
ditto	ditto, 1821 . . .	740
ditto	ditto, 1826 . . .	831

Since the latter date the number has rather diminished, now (1st of August, 1834,) it is 777, and in the interval it has been as low as 734 (1st of January, 1834). This diminution has *arisen entirely from an increase of the number cured;* the number of admissions has always increased and that of deaths remained stationary. The statements which follow relate to the years that have elapsed since 1825; because since then the statistical tables have been compiled with greater regularity and system, and likewise because I was then appointed to the medical department at the Bicêtre:—

	Maniacs	Idiots	Epileptics	Total
There were in the Bicêtre, on the 1st of January, 1825.	416	226	188	830
Admitted up to December, 31st 1833. .	3,048	388	384	3,820
Totals . .	3,464	614	572	4,650
Discharged during the same period .	3,078	409	399	3,886
Remaining on the 1st of January, 1834.	386	205	173	764

Of these admissions, there were among the maniacs 342 cases of relapse, of which 263 were in consequence of the original disease, and 79 from fresh causes and accidents. Relapses are to the total number of lunatics as 1 to 10. The number of maniacs pronounced incurable is 950—say 1 to 3,64. The proportion of unmarried admitted to the married or widower is as 1 to 1,14.

The professions which have furnished the greatest numbers are the following—day-labourers, shoemakers, masons, soldiers, domestic servants, porters.

With respect to the cause of lunacy, I repeat, that physicians can very seldom ascertain it with any certainty; however, to complete the statistics of the Bicêtre, I will add, to what has preceded, that cases where it was inherited, of defects in the development of the understanding, and of natural or premature old age, have occurred in equal proportions in the years from 1825 to 1833 inclusive, and among the accidental, physical, or moral causes to which lunacy has been attributed, the following are the more remarkable, and I place them in the order of their numerical importance, congestions, hemorrhages on the brain producing paralysis or delirium, epilepsy, abuse of spiritous liquors, domestic grief, ambition, misconduct, libertinism, destitution, frights, disappointed love, religious terror, or excitement, and over exertion.

The following are the conditions of the discharged—

	Maniacs	Idiots	Epileptics	Total
After Cure . .	1,098	9	17	1,124
Before Cure . .	584	58	177	819
Dead . . .	1,034	342	205	1,581
Removed . .	362	..	..	362
Totals .	3,078	409	399	3,886

The mean length of time the lunatics, who were discharged *cured*, remained in the Bicêtre, was 8 months and 3 days for the years from 1825 to 1827, *and only* 4 *months and* 6 *days* for the years 1830, 1831, and 1833.

If from the 3,464 lunatics, admitted during the nine years, are taken the 950 incurables and the 362 admitted as lunatics, but afterwards removed to another class, there remain 2,152 patients treated, of whom 1,098 have been cured, that is 1 in 1,96; but as it is not possible to know whether the incurability has been recognised at the moment of admission, or after the patient has been submitted to treatment, I shall not take advantage of this result, but that the council may be able to appreciate the improvements in my department. A table drawn up under his own direction, with the most scrupulous accuracy, is then given.

It results then from this table that the mean proportion of cures among the patients presumed to be curable, is, for the last three calculations, as 1 to 2, 55; and that of 442 lunatics I presumed to be incurable at the time of their admission, but to whom nevertheless we directed our most careful attention, 6 only have been relieved by the treatment they have experienced, and though, for the sake of humanity, I could wish that my opinion was oftener wrong, I ought at the same time to observe that it is with the greatest caution that we express our doubts of the curability.

There have been 5 suicides since 1828.

Calculating from the entire number in the asylum the cures have been in the proportion of 1 to 4,13, and have been effected after the patients have remained in the institution the periods of time stated below.

The mortality among the whole number of lunatics has been as 1 to 3,55.

	Cured.
In the first 3 months . . .	639
— 6 months . . .	225
In the 1st year	149
— 2nd year	74
— 3rd year	19
From the 4th to the 10th year .	11
— 11th to the 20th . .	5
— 21st to the 30th . .	0
— 31st to the 40th . .	2
— After a longer period .	0
	1,124

TO CORRESPONDENTS.

We have to apologise to our numerous correspondents for our inattention for some weeks past, but when we inform them that we were in his Majesty's safe keeping, our excuse will be satisfactory. The reason will appear by referring to another page.

Our Dublin Correspondent T.—We shall be obliged by regular communications. We are the foes of monopoly and jobbing in every quarter.

Mr. Hayden.—We have received a most intemperate letter from this individual, which we treat with pity and contempt. The London Medical Press is too independent to be influenced by venal motives, and no one but a person unacquainted with it could have formed a different opinion.

Scotus.—We are much obliged, and shall be happy to receive frequent communications from our able correspondent.

A Birmingham Correspondent.—Excessive occupation, of no ordinary kind, has hitherto prevented us from doing justice to the subject. It shall have our earliest attention.

THE

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THE LAST

ORAL LECTURES ON HERNIA,

Delivered at the School of Surgery, Peter-street.

By John Kirby, LL.D.,

Late President and Professor of the Practice of Medicine of the Royal College of Surgeons, Dublin, &c. &c.

LECTURE XIII.

Scrotal Hernia.

Hitherto, I have but occasionally adverted to large and complex forms of inguinal and scrotal hernia. Nor have I willingly treated on these, except when I could not avoid an allusion, that I might give more force to whatever instruction I had to give. Now, the time is come to consider the subject in detail, and I will commence by informing you that this hernia sometimes reaches an extraordinary, an almost incredible size. There was a poor man, who for many years sold brooms about our streets, in whom rupture had arrived at an immense magnitude. In transverse circumference it exceeded two feet, and from the pubis to the peritonæum, it nearly amounted to three. I give you the measure made of his double herniæ, as they stood several years before his death, at which time, judging without repeating any accurate examination, I may fairly say the tumour had been augmented one-fourth. He wore a large labourer's apron to conceal the deformity. He sustained the weight by a sling thrown round the shoulder. His progression was, as you can suppose, much interfered with, for notwithstanding all his contrivance, he was obliged to move with his limbs at an astride distance from each other. The tumour being down to the knee, the scrotum, nearly equally divided by the rupture, lost its rigorous appearance, and was straining from growth and distension. The penis was sunken in this pendulous mass, out of range of touch, and the prepuce presented an appearance bearing a strong resemblance to an umbilicus, with a flaccid but somewhat prominent circumference. The abdominal muscles lay back upon the spine, which could be easily traced even in an erect posture, and the pulsation of the abdominal arteries were easily perceived by the hand through the emaciated parietes. He told me the disease commenced in manhood, that it then existed thirty years, that it never had been treated by a truss, and never had been productive of more uneasiness than its size and weight were sufficient to account for. Of late, however, he felt a more constant pain in his back, and less capability to project his urine, which now fell more by guttation, trickled over the surface of the tumour, and this gave rise to a superficial but irritable excoriation. Now, a hernia of such a size as this is more a subject for curiosity than for surgical treatment; for all that can be done consists in relieving the incumbrance by proper suspension, and in endeavouring to prevent or to remove the sores which pressure will sometimes produce, and the abrasions arising from causes to which I have but lately referred.

In this case, you have an example of an irreducible hernia, which probably affords illustration of the greater number of those morbid constitutions and changes of structure and situation which required to be explained by numerous preparations collected from a variety of subjects. From the large aperture by which the sac and the abdomen communicate in these large herniæ, as well as from what I have observed, I am sure they are always partially returnable, that is, they spontaneously grow less during the recumbency of night, and may be diminished by pressure. In consequence of

"In 1780, he laid before the Royal Society an account of a woman who had the small-pox during pregnancy, where the disease seemed to have been communicated to the fœtus.

"In 1781, he was elected a Fellow of the Royal Society of Sciences and Belles Lettres, at Gottenburg.

"In 1782, he gave the Royal Society a paper on the Organ of Hearing in Fish. Besides the papers which he presented to that learned body, he read six Croonion lectures upon the subject of Muscular Action, for the years 1776, 1778, 1779, 1780, 1781, and 1782. In these lectures he collected all his observations upon muscles, respecting their powers and effects, and the stimuli by which they are affected; and to these he added Comparative Observations upon the moving Powers of Plants."

Mr. Hunter considered these lectures imperfect and unfinished, and withdrew them as soon as read, because, in his opinion, they were not complete dissertations, but only materials for future publications.

Every year added to the reputation of the subject of this biographical sketch, and he had now arrived at the highest eminence in the profession. He now possessed the means of enlarging his museum, as we are informed by one of his biographers.

"In the year 1783, Sir Everard Home informs us, 'Mr. Hunter was chosen into the Royal Society of Medicine, and Royal Academy of Surgery in Paris.

"'In this year,' continues the same writer,' the lease of his house in Jermy nStreet having expired, and his collection being now too large to be contained in his dwelling-house, he purchased the lease of a large house on the east side of Leicester Square, and the whole lot of ground extending to Castle Street, in which there was another house. In the middle space between the two houses, he erected a building for his collection. Upon this building he expended above three thousand pounds, and, unfortunately for his family, the lease did not extend beyond twenty-four years.

"In excuse for so inconsiderate a transaction, it can only be said, that the difficulties he had met with in finding ground in an eligible situation, had harrassed his mind, already too much occupied, to such a degree, that he was glad to be relieved from that embarrassment, and made the interest of his family give way to his present accommodation.

"In the building formed for the collection, there was a room fifty-two feet long by twenty-eight feet wide, lighted from the top, and having a gallery all round, for containing his preparations. Under this were two apartments; one for his lectures, and the other with no particular destination at first, but afterwards made use of for weekly meetings of his medical friends during the winter. To this building the house in Castle Street was entirely subservient; and the rooms in it were used for the different branches of human and comparative anatomy.

"During the execution of this extensive plan, I (Sir Everard) returned to England from Jamaica, where, at the close of the war, I had been appointed staff surgeon. Sir Archibald Campbell, the governor, coming home, gave me leave of absence on account of my health, and allowed me to attend him. We arrived in August, 1784, and I was permitted to exchange upon half-pay.

"I found Mr. Hunter now advanced to a very considerable share of private practice, and a still greater share of the public confidence. His collection had increased with his income. In this he was materially assisted by the friendship of Sir Joseph Banks, who not only allowed him to take any of his own specimens, but procured him every curious animal production in his power, and afterwards divided between him and the British Museum all the specimens of animals he had collected in his voyage round the world. To his friends, the Hon. Mr. Charles Greville and Mr. Walsh, he was also under particular obligations.

"Drawing materials from such ample sources, standing alone in this branch of scieuce, and high in the public estimation, he had so much attention paid to him, that no new animal was brought to this country which was not shown to him; many were given to him, and of those that were for sale, he commonly had the refusal: under these circumstances, his collection made a progress which would otherwise have been impossible.

"In April, 1785, the new room was completed, and I devoted the whole of the summer to the object of assisting him in moving his preparations, and arranging them in their proper order. Mr. Bell and Mr. Andre, a gentleman who had been the greater part of his life engaged in anatomical pursuits, were constantly employed in this business.

"At this period, Mr. Hunter may be considered as at the height of his chirurgical career; his mind and body were both in their full vigour, his hands were capable of performing whatever was suggested by his mind, and his judgment was matured by former experience; some instances of his extraordinary skill may very properly be mentioned.'

About this period he performed some bold and almost new operations, which greatly advanced operative surgery.

He removed a tumour from the side of the head and neck of a patient at St. George's Hospital, as large as the head to which it was attached. He brought the edges of the incised skin in opposition, and the large wound nearly healed by the first intention.

His next operation was still more satisfactory. It was the removal of a tumour from the neck, which one of the most eminent surgeons of the day had declared that no one but a fool or a madman would interfere with; but notwithstanding this opinion, Mr. Hunter operated, and the patient got well. It is almost needless to remark, that this case added to his reputation as a practical surgeon.

He discovered a new mode of performing the operation for the popliteal aneurism, by taking up the femoral artery on the anterior part of the thigh, without doing any thing to the tumour in the ham. The safety and efficacy of this mode have been confirmed by many subsequent trials; and it must be allowed to stand very high among the modern improvements in surgery.

"I believe Mr. Hunter was one of the first who taught, that cutting out the part was the only mode of preventing the hydrophobia; and he extended the time in which that might be done with every probability of success, beyond the period generally believed. This doctrine, in favour of cutting out the part, met with the strongest confirmation by two melancholy cases, in which, from the nature of the parts, and numberless scratches on the skin, it was impossible to remove them. Though caustic was applied to every part that had a visible mark, and every other precaution that could be thought of was used, the wounds in both instances proved fatal.

"If we consider Mr. Hunter at this period of his life, it will afford us a strong picture of the turn of his mind, of his desire to acquire knowledge, and his unremitting assiduity in prosecuting whatever was the object of his attention.

"He was engaged in a very extensive private practice; he was surgeon to St. George's Hospital; he was giving a very long course of lectures in the winter; he was carrying on his inquiries in comparative anatomy; had a school of practical human anatomy in his house; and was always employed in some experiments respecting the animal economy.

"He was always solicitous for some improvement in medical education; and, with the assistance of Dr. Fordyce, instituted a medical society which he allowed to meet in his lecture room and of which he was chosen one of the patrons. It was called Lyceum Medicum Londinense, and under his auspices and those of Dr. Fordyce, it acquired considerable reputation both from the numbers and merits of its members.

Notwithstanding his fame as an operator, he entertained the opinion since inculcated by one of our greatest surgeons, Sir Astley Cooper, "that the best surgeon was he who performed the fewest operations." It would be well for humanity, were this opinion more generally adopted in our great hospitals. I should add too, that Mr. Hunter always held this most showy part of surgery in the lowest estimation. "To perform an operation, (said he) is to mutilate a patient whom we are unable to cure; it should therefore be considered as an acknowledgment of the imperfection of our art." How different this from the presumed dexterity of some, who now a days court operations at the hazard of the patient's life, or submit to be executioners, when urged by the patient to attempt what others, of greater prudence or caution, have declined. These bold undertakings, as they are sometimes called, are not to be confounded with improvements in a necessary operation. Of the latter description was Mr. Hunter's for the aneurism, by which he materially lessened the pain, danger, and future suffering of the patient: and with this improvement may be classed the operations since successfully performed by others, on arteries of such magnitude, and so situated, that till our own days, no surgeon ever ventured to approach them with the knife.

(*To be continued.*)

LONDON MEDICAL EDUCATION.

THE LONDON UNIVERSITY.—THE institution of the London University, which formed so marked an epoch in the history of Medical education in this metropolis, and the various circumstances connected with its origin and progress up to the present day, afford ample materials for serious contemplation.

Frightful as the very name of a *University* was on its first announcement, yet the monstrous deformities which sprung up during its first efforts of existence, and the lamentable scenes which took place in rapid succession during its infantile years, were such as not only to allay many of the fears, but absolutely to afford a high source of gratification to the monopolists of Lincoln's Inn Fields, as well as to the infatuated dowagers of Pall Mall East.

Let us glance over the history of this institution from its commencement, and endeavour to trace the advantages which society has derived from it, along with the disappointments and evils which have arisen from this public institution.

We have a perfect recollection of the excitement which was created when the proposal to institute a University in this great metropolis was first announced, in the form of an able letter addressed to Lord (then Mr.) Brougham, by Mr. T. Campbell (author of the "Pleasures of Hope"), whose descent from Mount Parnassus on this occasion was highly gratifying, particularly to a class of individuals, well known to the public under the cognomen of *Liberals*.

The imposing name of a London University, patronized by the Whigs and Radicals, became at once a rallying point for all those who were opposed to the old system. It was, however, a cheering prospect to the youth to be able to receive a comprehensive education on easy and economical terms, and educated on those liberal principles, advocated by the party who were to be the founders of the institution, in place of the ancient and bigoted system of education so rigorously followed at the Universities of Oxford and Cambridge.

Until a JOINT STOCK COMPANY was formed, and the great wheels of the machine organised, all those who had most warmly embarked in the scheme, and had proffered their services in furthering the foundation of the new institution, entertained the most sanguine hopes of success, and many of the most eminent individuals in the scientific world came forward, either directly or indirectly, and offered their services as teachers in the various branches of education. And there was no feature which was more captivating to the reflecting portion of the public, when a great dinner was given, on laying the foundation stone of the building, than Mr. Brougham's eloquent harangue, stating that the Professors should be chosen entirely from merit!

It, however, unfortunately happened, that no sooner had the building been completed, than a system of intrigue and jobbing commenced, and though it may have been equalled in some of our public institutions, it has certainly never been surpassed. And this system of corrupt influence extending from the most important offices of the establishment, down to those of the lowest menials, exhibited throughout a system of fraud, which, in giving the history of this institution, ought not to be overlooked.

Mr. Campbell, who from having the credit of originally proposing the university, and who it is natural to suppose would expect some consideration and courtesy in the execution of his own design, was soon altogether overlooked, and all his suggestions treated with neglect. The whole influence and patronage being usurped by the liberal and prince of reformers, Mr. Brougham.

The first appointment of consideration which was made was that of Mr. Horner as warden, a salary of no less than one thousand pounds sterling a year being attached to that office. And without presuming to cast any obloquy on Mr. Horner, it is enough now to say that he had been intimately connected in private life with Lord Brougham, and that the income attached to the office was in a few years considered so extravagant, and the office itself so absurd, that Mr. Horner, at the suggestion of his friends, *retired* altogether from the university, and was afterwards provided for by Lord Brougham.

The election of the professors next commenced, and our remarks need only be made on those of the medical chairs.

Mr. Charles Bell was elected professor of surgery; Mr. Pattison, professor, and Mr. Bennet, the demonstrator, of anatomy; Dr. Conolly, of practice of physic; Dr. Turner, of chemistry; and Dr. Anthony Todd Thomson, of materia medica.

It must be admitted, that several of these individuals, particularly Drs. Grant and Turner, were selected from their

acknowledged talents and scientific acquirements, whilst some others obtained their situations, merely by a system of the grossest jobbing and intrigue.

Mr. Charles Bell, it must be admitted, had just pretensions to the chair of surgery, though he obtained the election through his friend and able coadjutor in the subsequent elections of the university.

One session did not pass over without the seeds of dissension having been sown amongst the medical faculty, as they now call themselves, which led to material changes in the arrangements of the university.

Mr. Bennet, who had been demonstrator, and whom the students as well as himself considered more fit for professor of anatomy than Mr. Pattison, procured the ensuing season a share in the anatomical lectures; Mr. Charles Bell, in place of lecturing on surgery, got created for himself a chair of physiology, Mr. Pattison now giving lectures on surgery.

These incongruous arrangements could not be expected to give much satisfaction, or to quiet those dissensions which had been the offspring of selfishness, jealousies, and intrigue. But a few lectures had been given by each of the distinguished professors, when an open rebellion took place. Mr. Charles Bell had scarcely commenced his course on physiology, than, meteor-like, he fled from the field of battle! It was said for him that he was desirous of obtaining *for* himself the anatomical chair, and being long-sighted enough to see that there was no probability of his realizing such an arrangement, and as the chair of physiology held forth more honour than profit, like a prudent individual he made a quiet retreat.

Scarcely had Mr. Bell got safe out of the field, than the battle began to rage with redoubled fury. Mr. Pattison was assailed with every weapon of abuse by the students, whilst almost all of them became the champion of Mr. Bennet's cause. Drs. Turner and Thomson in particular, assisted by the warden, directed skirmishing parties against the American professor with great effect. So that what with the artillery of the students, and the bombarding of the professors, the unfortunate American professor was under the necessity of throwing down his arms, and surrendering at discretion. He was most scurvily treated by all parties.

The third season of this *liberal* institution was no less big in events than the two sessions which had preceded it. Mr. Pattison, with a bonus of two hundred pounds, as a full remuneration for his past services, was shipped off to America! Mr. Bennet had died at the close of the former session. Dr. Conolly resigned. So that three chairs were now vacant for new adventurers.

Mr. Samuel Cooper (the celebrated author of the Dictionary of Surgery) was elected to the chair of surgery; Dr. Jones Quain, whose brother Richard had been already occupied in the dissecting-room, was appointed professor of anatomy and physiology; and Dr. Elliotson now filled the chair of the practice of physic.

These new elections were of vital importance to the future interests of the university, and time has shown that the arrangements would have been complete, had not a low-minded, narrow policy prevented the medical faculty from electing Dr. Grant to the chair of physiology.

Dr. Quain was universally acknowledged to be an excellent and most popular teacher, and up to the period of his resignation, the number of students of anatomy annually increased. The business of the dissecting-room was also satisfactorily conducted by Mr. Richard Quain.

Mr. Samuel Cooper gave general satisfaction as a lecturer on surgery, and though his lectures were not distinguished for their originality or eloquence, yet the mass of information which he has collected together, his candour and love of truth, have been duly appreciated by the students, as well as by the profession at large.

When Dr. Elliotson's election took place, he had arrived at the zenith of his fame.

The university continuing to flourish, it had been always considered that nothing could contribute more to ensure its reputation and complete success, as a medical school, as to have attached to it a hospital for clinical instruction. A fund was accordingly collected for this purpose, which, with the fees of the students was supposed to be sufficient to support such an establishment, and accordingly an hospital was built, and at the commencement of the session of 1834, 1835, was in a state for the reception of patients.

So long as this University continued to be the seat of internal discord, and the conduct of its professors merited the reproach of the public, so long did the corruptionists of Lincoln's Inn Fields view that institution with ridicule and contempt, but whenever harmony was

established and the whole fabric meeting with the countenance and support of a great mass of the general practitioners and above all when they procured a hospital, they became an object of jealousy, ill-will, and we may say, even of fear.

The hospital, notwithstanding all the intrigues of several individuals of the Council of the Royal College of Surgeons, more particularly the junta of St. Bartholomew and Guy's Hospitals, was recognised by the College of Surgeons, and what rendered this hospital more particularly odious, and its recognition violently opposed by certain members of the counci was, that the student's fee for attending it was less than half the *price* of the other hospitals to which certain members of the council were attached, and their selfish interest deeply involved.

During five successive seasons the London University may be said to have flourished, but since that period, events have taken place which have tended to create a strong feeling against that institution, and forcibly recal many of those intrigues which took place during the first period of its existence, and to give the public mind an impression that if the principle of electing professors, which they adopted on the retirement of Dr. Quain, be again resorted to on any important vacancy, the school must tumble into that state of degradation and the medical faculty be heaped with that odium and contempt which such conduct will well merit.

As a faithful historian I mention its defects more in sorow than in anger; but I am sure that the professors of liberal principles should prove themselves to be as arrant monopolists and intriguers as those they repudicate so energetically.

ANGLICUS.

THE ROYAL COLLEGE OF SURGEONS..—There has been a report prevalent in the metropolis, that the Council of this learned body had serious intentions of evincing the feeling which they entertain relative to the conduct of an individual of their body, as to certain transactions which have been much before the public. We regret to state, that the creditable feeling has been entertained only by Mr. Keate, who, it is by all admitted, has on this occasion disregarded private considerations. As, however, a rigorous enquiry would lead to the exposure of other transactions of a similar character, in which so many other members of the Council have been involved, it is now anticipated, we may say understood, that Mr. Keate will follow Sir Benj. Brodie's advice on this occasion, and that the whole matter will be allowed to slumber in peace.

ST. GEORGE'S HOSPITAL.—A tremendous explosion was about to take place at this Hospital, the shock of which must have caused the very foundation of the new building to tremble.

The vacant office of assistant apothecary to this institution had been violently contested between Mr. De Paquet and Mr. Bage, the former relying on his character, the support of Dr. Wilson and Mr. Lane, and the independent governors; the latter ardently supported by Sir B. Brodie, Drs. Seymour and Chambers, with all their menials and dependents.

The threat of Mr. Nussey to withdraw his countenance and support from the hospital, and to expose the whole system of intrigue and jobbing of the medical officers, prompted Sir Benjamin to allay, by his mild and persuasive manner, Mr. Nussey's irritation, and that his candidate (Mr. N.'s) should have a *majority!*

The necessary instructions were given accordingly, and obeyed by all except Dr. Seymour, whose language in reference to his surgical colleague we dare not repeat. Neither shall we make any comment on what Dr. S. appropriately termed the jesuitical correspondence, as we are satisfied that there will be no bloodshed.

METROPOLITAN FREE HOSPITAL,

29, CAREY STRET,

LINCOLN'S INN FIELDS.

THE Committee of the Metropolitan Free Hospital are now enabled to lay before the Governors of the Charity and the Public, the Second Report of their medical officers. In doing so, the Committee advert with pleasure to the origin of this Hospital. With unqualified satisfaction they have watched its rise, and they look with sanguine expectations to the rapid progress it is making.

Here gratuitous relief is found by the sick poor of every nation and class. *No letter or other introduction is required:* the doors are open to all, and the personal necessities of an applicant suffering from disease and destitution, are the only credentials required to insure assistance.

Upon a charity so extensive and unlimited in its objects, the demands must necessarily be great. These demands, by the liberality and sympathy of the

public, the Committee have, to this period, been enabled to meet. In the financial affairs, the strictest economy is observed: the supplies are narrowly and jealously watched, and *none of them are allowed, either directly or indirectly, to proceed from any member of any Committee.*

The practical utility of this Charity is shown by the Medical Report. Every office not menial is filled gratuitously, and every shilling of the funds is applied to the legitimate objects of the charity.

The Committee earnestly and anxiously solicit the support and co-operation of the charitable and humane: they seek the assistance of those who have the means of affording it, and know they will not ask it in vain.

By order of the Committee.

WILLIAM GRESHAM,
Hon. Sec.

MEDICAL REPORT.—The Medical and Surgical Officers have much pleasure in laying their present Report before the General Committee of the Institution.

From the opening of the Hospital, on the 14th of May last, to the 31st of October last, they have admitted to the benefits of the Institution the large number of 1530 patients. Of these, 945 were under the care of the Physicians, and 445 under that of the Surgeons.

In making this Report, the Medical Officers feel additional satisfaction in the fact, that of the patients who have sought aid at their hands, those afflicted with infectious or any other particular form of disease have not presented themselves in an unfavourable proportion. They have reason to feel that their endeavours have been successful in mitigating much bodily suffering, and in restoring to health many poor persons who, but for the existence of this Charity, would have been deprived of the means of obtaining their daily bread.

Although patients have applied from remote parts of the metropolis, the immediate vicinity of the Hospital has supplied by far the largest proportion of those who have received relief from it. The Medical Officers desire to press this fact upon the Committee, and to suggest the propriety of arrangements being made for giving it publicity amongst the wealthier inhabitants of the neighbourhood, who, they cannot doubt, will be readily induced to add their support to the Charity, as soon as a proper representation of the circumstances is made to them.

The medical officers have taken into consideration the cost of drugs, &c., expended for the use of the institution, and they assure the Committee that, although the outlay has obviously been large at the commencement, they have used and will continue every exertion, consistent with the safety of their patients, to be prudent and economical in the expenditure of these costly necessaries.

In conclusion, the medical officers congratulate the Committee and Governors at large on the realization of their most sanguine wishes as to the sphere of utility to which this institution has attained. The number of patients has steadily increased from the opening of the hospital, and there appears great reason to suppose that it will continue to do so; whilst even the present attendance is sufficient to show that the benevolent hopes of the founders of the institution were not vain, nor the charity of its supporters misplaced. Past success fully warrants the assumption that the quantity of good effected by this hospital will only be limited by the amount of the funds at the disposal of its managing officers; and it is earnestly to be hoped that the wealthier classes, on considering this position, and their duty with reference to it, will not forget that if their poorer brethren are the more immediate partakers of these benefits, their own interest, not less than their duty, is concerned in everything which may tend to improve the health, comforts, and moral condition of the humbler grades of society.

DAVID UWINS, M.D.
M. RYAN, M.D.
JOHN STEGGALL, M.D.
ALEX. TWEEDIE, Surg.
P. BENNETT LUCAS, Surg.
JOHN DALRYMPLE, Surg.
W. HENTSCH, Apothecary.

DR. JONES QUAIN.

WE are happy to be able to state, that Dr. Jones Quain, late Professor of Anatomy at the London University, is arrived in town in perfect good health, as we have had much pleasure in witnessing. The ingenious reports which were industriously circulated some time ago for a *certain purpose*, are thus completely dispelled, so that other causes for his resignation must now be looked for.

MEDICAL SCHOOL OF THE DUBLIN COLLEGE OF SURGEONS.

Dr. Colles has resigned his professorship of surgery, and Mr. Macnarahis professorship of Materia Medica in the Medical School of the Dublin College of Surgeons. These resignations are highly detrimental to the above named school. Our correspondent Veriloquens, has shewn up the monopoly of the Irish College in supporting a school against rival establishments, and for this reason we had much pleasure in inserting his first strictures. These no doubt may be unpalatable to some individuals; but we are certain of this, that of the London or Edinburgh College of Surgeons was so insane as to bolster up a school and oppose all others, the very walls of their theatre would be raized about their ears. Such a system may do in Ireland, the land of misfortune and misrule almost in every thing, but it would not be tolerated in England or Scotland. If the Dublin College is to have a school, and if its professers are to examine their own pupils for diplomas, which gives them the most unfair advantages over rival institutions, let them for the sake of common decency withhold their exposition of medical etiquette, which on late occasion was a violation of the recognised principles of moral conduct, derogatory to professional ethics and an insult to the medical character.

A Medical Vocabulary, or Explanation of all Names, Synonymes, Terms, and Phrases used in Medicine, Surgery, and the relative Branches of Medical Science; giving the correct Derivation, and Directions for the proper Pronunciation of each; intended chiefly as a Book of Reference for the Student, but also adapted to general use. By a Medical Practitioner. 12mo. pp. 185. Carfrae and Son, Edinburgh, 1836; Longman and Co. London.

This is an exceedingly useful and comprehensive work, containing a vast deal of information in a small space. As a dictionary of terms, it is a multum in parvo. It contains many new terms, not to be found in other works of the kind, and ought to be in every student's collection of books. The older practitioner and the general reader ought likewise to possess it. It is very accurately executed, and well deserves encouragement. It is every thing it professes to be, and is a very cheap and excellent dictionary of modern terms. We have much pleasure in placing the preface before our readers, and at the same time assuring them that we fully agree with the sentiments expressed in it.

"The Medical Vocabulary is intended to afford, in a convenient form, the simple explanation, and, as an essential part of this, so far as practicable, the true derivation of all names, synonymes, terms, and phrases now in use in medicine, surgery, and the collateral branches of a medical education; together with directions for their proper pronunciation.

"The idea of a work of this description suggested itself to the author under annoying experience of the want of such a help, during the greater portion of the period enjoined for the medical student's attendance at lectures. Much of the phraseology and technicalities of the profession, it must be owned with regret, is absurd, unaptly designative, and often overstrained in its application; so that the progress of the student is greatly retarded, from his being unable to comprehend its terms, or to trace the relation between them and their intended meaning. In regard to a large proportion of the language employed in medical lectures and writings, an ordinary knowledge of the Greek and Latin Classics will not suffice for its interpretation; thus, a book of reference in which its manifold peculiarities are explained, is quite indispensable to the student.

"It may be objected, that there already exist several valuable works, which, beside rendering a comprehensive signification of professional terms, contain complete instructions upon every point of medical science. In answer, it is submitted, that the very excellence of these, in the estimation of the physician and surgeon, in so far disqualifies them for being interpreters to the young student. They are necessarily so diffuse in their elucidations, and are so deluged with obsolete, classical and fanciful synonymes, with minute description, narration and treatment of cases, and matter of opinion upon all practical points, as to appear to *him* formidably tiresome, complex, and bewildering: their bulk precludes their being at all times referred to, and, to some at least, their cost renders their possession inconvenient.

"To non-professional individuals, for whose use this work is also intended, similar remarks are applicable; for they may be viewed in the same light as the young student, with respect to the almost universal unintelligibility of medical lan-

guage; but with this additional disadvantage, that they have few opportunities of hearing, or asking for definitions, while he, by oft-repetition in his hearing, may at last acquire some notion of the proper application of many of its terms.

"To medical students, then, and to those unconnected with the profession, the Medical Vocabulary is offered, in the hope that it may be found useful."

SOLLY ON THE HUMAN BRAIN.

(*continued from p. 256.*)

We now resume Mr. Solly's extensive account of the comparative anatomy of the brain, and again recommend his work to our readers. It will be perused with instruction by those few who have not as yet studied Dr. Grant's graphic work on Comparative Anatomy.

"Advancing from this, one of the most concentrated forms of the nervous system in the crustacea, we next meet with a very decided step towards the concentration of the higher orders in some of the insect tribe; for the nervous ring round the commencement of the alimentary canal receives additional ganglia on its superior surface, until the whole mass formed by the union of these nervous centres, or instruments of consciousness, assumes the appearance, and seems entitled to the appellation, of a *brain*.

"The intimate connexion and apparent dependence of the organs of sense, as the eye, &c., upon those appropriate masses of cineritious or pulpy neurine in which their nerves terminate, and to which, therefore, we suppose the impressions of light, &c., received on their peripheral expansions transmitted in order to become perceived by the animal, is beautifully illustrated by the various alterations which take place in the nervous system of the moth as it advances from the caterpillar to the perfect insect, or imago.

"In this part of my task I shall again avail myself of the excellent descriptions of that most trustworthy and indefatigable inquirer, Mr. Newport.

"'The cerebral mass of neurine in the caterpillar lies above the œsophagus, and is formed of two lobules closely united, convex upon their upper, and a little concave on their under surface, so as in the middle line to accommodate themselves to the anterior part of the dorsal vessel which passes immediately beneath them, and to the œsophagus along which this is directed. The longitudinal cords originate from the under surface of these lobules, and passing a little backwards meet beneath the œsophagus, and by their uniting form the heart-shaped or first ganglion. From this they are continued close to each other into the next segment or true collar of the future moth, and here connected from the second ganglion, which is nearly of a spherical form. The cords then gradually diverge and proceed apart from each other, passing on the outside of and inclosing between them the insertions of some of the diagonal muscles of the future thorax, until they again unite in a third and distinctly bilobate heart-shaped ganglion. From this they are continued in the same manner into the fourth segment, and uniting, form a similarly shaped fourth ganglion. They then pass close to each other into the anterior part of the fifth segment, and form a ganglion, the distance of which from the fourth, like that of the second from the first, is scarcely more than half of what exists between any of the other ganglia. From the fifth they are continued to the sixth, seventh, and so on to the eleventh segments, forming in the middle of each one nearly spherical ganglion, which has scarcely any appearance of having originally been formed of two lobes. The eleventh ganglion, however, is distinctly bilobate, and at this period of the larva's existence is in reality a double ganglion, with a constriction in its middle, which is more or less apparent in different individuals.'

"It would be inconsistent with my purpose if I were to expect the student to follow the description of the various nerves connected with these ganglia in the present stage of his knowledge; nor do I conceive that such a proceeding would diminish his difficulties in reference to the study of the human brain: at the same time, however, as he may find it interesting to refer to them when he has investigated their distribution in man, I will here introduce Mr. Newport's accurate description.

"'*Nerves of the Head.*—When viewed from above, the cerebral lobes are pretty uniform in appearance, and are clearly distinguished from each other by a depression between them. This is more apparent on the anterior than posterior surface, and arises from the lateral part of each lobe being carried a little forwards, so that they lie across the œsophagus in a curved or semilunar direction. From the anterior and lower part of each lobe originate four remarkable nerves.

"'Two of these are distributed towards the front of the head, near the flexor muscles of the mandibles; a third passes a little forwards, descends, and uniting with its fellow from the opposite lobe, forms a circle round the œsophagus, to the under surface of which it distributes a few filaments; while the fourth, which originates rather higher up than the others, forms what has been called by Lyonnet the recurrent ganglion and nerves.

"'From its origin this nerve is directed forwards and downwards along the side of the œsophagus, or rather posterior part of the mouth, but gradually altering its course, inclines upwards and inwards, and then a little backwards, until, by meeting its fellow of the opposite side, above the roof of the mouth, the two, by their union, form a semilunar ganglion immediately below the bifurcated portion and distribution of the dorsal vessel. From the front, or most convex surface of this ganglion, originates a small branch that distributes filaments in the direction of the superior lip, while a large nerve is produced from the posterior surface, which passes backwards beneath the cerebral lobes, along the middle of the œsophagus, covered by the dorsal vessel. On arriving at the stomach it divides into three branches, which are distributed chiefly to that organ. Throughout the whole of its course, from the ganglion to this division into branches, it distributes filaments to the dorsal vessel and to the œsophagus. I have not yet succeeded in tracing it in this insect beyond the anterior part of the stomach; but in the Gryllus viridissimus, Linn., I was once enabled to follow its centrel division along the whole of the stomach and part of the small intestine, from which, with a little care, it was readily detached. Its length from the ganglion to the trifid division in the sphinx is much increased during the changes of the insect, and corresponds precisely with the elongation that takes place in the œsophagus. The form of the ganglion undergoes no alteration.

"From the analogy that exists in the distribution of this nerve to that of the eighth pair in the vertebrated animals, it is probable that its functions are of a somewhat similar nature,—that in reality it is the par vagum, or pneumogastric nerve of insects. The other nerves from the cerebral lobes arise nearer the lateral surfaces. The first of these are destined for the future antennæ, and proceed from the front near the origin of the cords. At the last period of the larva state they are of considerable size and length, and lie packed in sigmoid folds on each side the head, within the cranium. The next are the optic nerves. These come from the upper part of each lobe, and in the larva are scarcely more than slender cords directed diagonally outwards to the six minute eyes. In addition to these nerves from the cerebral lobes there are also two minute pairs which form very remarkable ganglia, similar to those described by Straus Durckheim, in his Anatomy of the Melolontha. These ganglia I have ventured to call anterior lateral ganglia. The two pairs of nerves originate, one from the base of the nerve to the antennæ, the other from the posterior surface of each lobe, and they are directed backwards and outwards, and after passing some distance unite and form an irregular lunated ganglion, which is closely connected to another of an oval form. Both these ganglia distribute filaments to the muscles of the neck and to a lateral branch of a dorsal vessel, and are connected with a system of nerves derived from the large ganglion in the second segment. All the nerves which supply the organs of motion belonging to the head and mouth, excepting only those to the antennæ, derive their origin from the first ganglion. There are four distinct pairs, three of which proceed from the anterior and one from the lateral surface of the ganglion. The largest pair from the anterior surface are divided into three branches, and go directly to the mandibles; the next to the palpiform spinnerets; and the third apparently to the inferior lip, while the lateral pair are given exclusively to the silk bags, which afterwards are the salivary vessels of the perfect insect.

"*Nerves of the Thorax.*—They arise from the second, third, fourth, and fifth ganglia, and their intervening cords.

"'The first pair from the second ganglion are remarkably small in the larva, and their distribution is not easily traced. The second are large, directed forwards, and divided into many branches, which supply the muscles of the head and neck. The third are carried backwards for a little distance, and then turning forwards enter the first pair of legs. Both the cords between the second and third ganglia produce a single nerve, which is directed backwards, and unites at an angle with the first nerve from the third ganglion. These form a single trunk, which goes to the first pair of wings in the perfect insect. It is now of small dia-

meter, but is carried forwards, and distributes filaments among the muscles at the anterior part of the segment. This trunk is also connected with a system of nerves of which we shall speak more particularly hereafter. The second pair from the third ganglion, distribute from their base a small branch, which looks like a distinct nerve, while their main trunks, at a distance from the ganglion, divide into two branches and are given to the second pair of legs. The cords between the third and fourth ganglia also produce a nerve that unites, in a manner similar to the preceding, with the first nerve from the fourth ganglion, and forms a trunk which ramifies among the muscles of the fourth segment, and is destined for the second pair of wings. The second pair of nerves from the fourth ganglion are given to the third pair of legs. The nerves from the fifth ganglion belong also to the thorax, and are those which are given to the muscles of the hinder part of the thorax in the perfect insect.

"'*Nerves of the Abdomen.*—All the nerves from the sixth to the termination of the eleventh ganglion, belong to this division of the body; and, with the exception of those from the latter, are pretty nearly uniform both in number and distribution. Each ganglion produces one pair of small nerves, and one of large. The small ones are given to the flat and minute tracheæ of the ventral surface. The large ones pass transversely across the segments, and divide each into two branches. One of these passes over the inner range of fibres and between the layers of abdominal muscles, and following the course of the trachea, gives its branches to the dorsal muscles, and to the integuments of the back; while the second passing also between the layers of ventral muscles, distributes its branches to their inner surface, and to the integuments of the under surface of the body. The eleventh or terminal ganglion produces five pairs of nerves, four of which are of considerable size. These are arched backwards, and three of them are given to the remaining segments of the body, while the others supply the colon, rectum, and organs of generation.

"'Besides the nerves thus described as constituting those of the head, thorax, and abdomen, there are others which merit some attention, as they seem to form a distinct or superadded series. Lyonnet has accurately delineated them in his excellent anatomy of the larva of the *Cossus*. There is a plexus of them lying transversely in every segment, attached by apparently a single filament, passing between the longitudinal cords to the posterior part of every ganglion. Some of the nerves from each plexus in the abdomen unite with the principal nerve from the next ganglion, while others ascend and ramify among the tracheæ and dorsal muscles. The principal branch goes directly to the tracheæ which come from the spiracula. In the thorax, the plexus from the hinder part of the second ganglion unites some of its filaments with the nerve destined for the first pair of wings, while others are distributed among the muscles. The nerves from the plexus attached to the third ganglion give, in a similar manner, some of their filaments intended for the second pair of wings, and some to the muscles. The second ganglion has the transverse plexus from the first, attached pretty closely to its anterior surface. This plexus distributes its nerves laterally to the muscles of the head and neck. It is also united by a small branch with the anterior lateral ganglia, and with the first pair of nerves from the second ganglion, so as to form a complete link or medium of communication between the nerves and ganglia of the head, neck, and second segment. From the distribution of these nerves it seems probable that they may constitute the origin of a distinct system; but whether this system in insects be analogous either to the sympathetic or to the respiratory system of vertebrated animals, is yet a matter of inquiry. From the principal branches from each abdominal plexus being always distributed among the tracheæ, near the spiracula, there seems reason for inclining to the latter opinion.

"'Such is the arrangement of the nervous system when the larva has attained its full growth, and ceased to eat, preparatory to its changing into a pupa. Thirty days after the insect has become a pupa the change in the nervous system is very evident. The cerebral lobes are increased in size, the optic nerves a little extended, and the first ganglion has been brought so very close to the lobes as to appear to constitute with them a single mass, through which there is a small aperture for the passage of the œsophagus. All the ganglia of the thorax are much enlarged, and the first pair of nerves which belonged to the second ganglion in the larva now appear to take their origin from the cords, and after anastomosing with the second pair, to form with them a plexus which supplies the

neck and collar; while the third pair passes before to the muscles of the first pair of legs. The first pair from the third ganglion, and the roots they derive from the cords, are much enlarged, as also are the second pair given to the second pair of legs. But the greatest alteration is in the fourth ganglion, which is now more than double its former size, is elongated and bilobate, and gives off four pairs of nerves. The first, including the roots they derive from the cord, are given to the inferior wings; the second, to the third pair of legs; the third pass backwards to the muscles of the abdomen; and the fourth are directed upwards, divided into three branches, and are distributed to the posterior muscles of the trunk. The fifth ganglion is close to the fourth, and coalesces with it; the nerves last described being those that originally belonged to it. The sixth ganglion, much decreased in size is sometimes found at this period close to the fifth, from which it is separated only by a slight indentation. It is more frequently, however, at a short distance from it. The longitudinal cords are no longer irregularly folded in the abdomen; they now lie in a direct line between the ganglia, but neither these nor the cord itself are increased in diameter.'

"Without following out each different stage in the gradually progressive change which the nervous system of the pupa undergoes previous to its attaining its full development in the imago, we will advance at once to it in its most perfect form.

"The cerebral ganglia are now extended transversely, and form, with the first subœsophageal ganglion, and the enlarged crura which connect them, one continuous mass around the œsophagus and anterior part of the dorsal vessel. The second ganglion has entirely shifted its position, and receded towards the middle of the thorax, and has coalesced with the third, which has entirely disappeared, and seems to have joined in part with both the second and fourth, and the intervening cords. This aggregation of ganglia and cords is situated in the middle of the thorax, and supplies all the muscles in that part of the body. The longitudinal cords are continued from the hinder part of the fifth ganglion, and just before leaving the thorax to enter the abdomen, they give off the nerves which formerly belonged to the sixth ganglion, which is now entirely obliterated. The cords then descend into the abdomen, and immediately give off the nerves that belong to the seventh ganglion, which, with part of the cord that existed between the sixth and seventh ganglia, is also obliterated. The cords are then continued in a direct line along the abdomen, the eighth, ninth, tenth, and eleventh ganglia being situated as in the previous stages. Such is the state of the nervous system at the period antecedent to the development of the perfect insect, which usually takes place about the middle or latter end of June. Mr. Newport details some further points of interest as regards the distribution of the nerves and the obliteration of a ganglion in the thorax, but it would be foreign to our purpose to dwell upon them at present.

"The nervous system of the sphinx in its perfect condition, differs but little in its general arrangement from that of the pupa in its last stage. Thus, there is no further alteration in the cerebral ganglia, nor in those which constitute the thoracic mass, from which nerves to the organs of locomotion are distributed; but the whole are covered in by a new structure, and do not lie, as in the larva, in the open cavity of the thorax.

(To be continued.)

Encouragement of Female Emigration.—News for the Ladies.—Three-fourths of the inhabitants of Cattsville, Wisconsin Territory, are males, the other fourth are married. Some merchants there offer to pay the freight of a cargo of girls, and will ensure them, before starting, a handsome log hut each, and as much hominy and bears'-meat as they can eat. All they will have to do is to hoe corn, dig potatoes, and do the housework in general.

Aurora Borealis—Popular Credulity.—Something Curious.—It is a singular fact, that a flock of sheep in this neighbourhood (Fife), were struck blind on the night of the late brilliant display of the aurora borealis. They were bled next day, and thus had the use of their visual organs restored to them. If the circumstance is anything more than a mere coincidence, it would seem to imply that sheep are very attentive observers of celestial phenomena.

RECEIVED FOR REVIEW.

An Introductory Lecture on Chemistry and Pharmacy, delivered at the commencement of the Session of 1836-7, at the Hunterian School of Medicine. By J. Hunter Lane, M.D., &c., &c.

MANCHESTER ROYAL INFIRMARY

THE

London Medical and Surgical Journal.

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CLINICAL LECTURE,

Delivered at the North London Hospital, Session 1836,

By Professor Samuel Cooper.

LECTURE

On a Case of Concussion of the Brain.

When a man receives a blow on the head and becomes insensible, or when he is stunned by a violent shaking of the brain from a fall, even though the head itself may not be immediately struck, the injury is termed *concussion of the brain*. If the brain be inspected directly after death, brought on entirely and immediately from this cause, before inflammation has had time to commence, and when no complication of extravasated blood, or laceration of the textures of the brain exists, whatever derangement of the organization of the brain may have taken place, it does not at all events admit of discovery by dissection.

At first in this affection there is complete insensibility to external impressions, the patient lying perfectly stunned, from which state, however, he may recover in a few minutes, get up, and walk away as if nothing had happened. In other examples, as in that which I purpose to bring under your notice at this time, the state of insensibility lasts longer, and is followed by one, in which the sensibility is impaired but not destroyed, the patient not being affected by ordinary impressions, sometimes being incoherent, as if intoxicated. The pupils contract on exposure to light; there is no paralysis; respiration is generally easy, but in a few instances it has been laboured and rather stertorous. In severe cases of concussion, inflammation of the brain sometimes follows even when the immediate effects of the concussion have subsided for a considerable time. Occasionally, there is no interval of comparative or seeming approach to health, and then the symptoms of concussion gradually change into those of inflammation of the brain and its membranes. In many cases concussion is combined with other mischief, the symptoms must therefore be more or less diversified and perplexing. I will read a case to you we have lately had in the hospital.

John Moiety, aged 32, was brought to the hospital on the 5th of September, labouring under the symptoms of concussion of the brain, produced by falling down a flight of stairs, and the receipt of a violent blow on the occiput. This happened five hours before his arrival at the hospital. He was intoxicated at the time of the accident. He was stunned by it, and continued perfectly insensible. Before the man was brought to the hospital, a surgeon took away two pints of blood directly after the accident. When the head was examined, a swelling, about half the size of an egg, was noticed over the occipital protuberance. There was no wound, nor was any injury of the bone discoverable. On the patient's admission he was in a state of extreme depression; his face and lips were pale, his extremities cold, no pulse was distinguishable at the wrist, the respiration 17 in a minute, and laboured, though with very little stertor. Every vital function was reduced to its lowest ebb, the right pupil was dilated, the left one natural. Mr. Hallam, one of the house surgeons, saw him, and directed bottles of hot water to be applied to his feet, and warmth to the epigastrium; and to take the following draught:

℞ Sp. Ammon. Arom. Mxv.
Mist. Camphoræ ʒj.

To be repeated if necessary. A teaspoonful of hot brandy and water was also ordered every half hour, until a slight re-action begins. At eleven o'clock P.M.

the report states that the collapse is diminishing, the extremities are becoming warm, pulse 50, and feeble; he has passed a very restless day, the insensibility continues, and he is not roused by being pinched. Both pupils are now dilated, and the iris of each eye does not contract even on a lighted candle being placed before the eyes. The stimuli were ordered to be discontinued.

Sept. 6. He passed a restless night; he got out of bed several times, and has vomited repeatedly; face flushed, skin hot, pulse 60; tongue brown and moist; partial sensibility and intelligence when roused; answers questions in a low tone; it was found necessary to use the straight waistcoat; great heaviness about the eye, and stupor. Five grains of calomel were given directly, and saline mixture with tartarized antimony every third hour. Mr. Quain, at the hospital visit, ordered his head to be shaved, and cold evaporating lotion to be applied to it; pulse 70, rather full; bowels confined; stupor diminished; head and skin hot.

V. S. ad ℥viij.

Senna mixture. To be repeated until the bowels act.

7th. Great restlessness; kept in bed with difficulty; repeated retching during the night, but he did not bring up any thing; bowels not moved; pulse 90; skin hot, but moist; great thirst, drinks diluents copiously; the senses more collected, and he answers some questions rationally; pupils dilate, but now contract slowly on exposure to light.

℞ Hydrarg. Submur. gr. iij.
Ol. Tiglii gutt i. in
Pil. statim et rept. 3tia quaq. horâ.

The mixture and cold lotion to be continued. In the evening his bowels had been freely opened; he slept during the afternoon; pulse 90; great heat of the surface, with thirst, dry tongue, and parched lips.

V. S. ad ℥x,
Emp. Cantharid. nuchæ.

8th. Was very restless during the night, talking incoherently, and attempting to get out of bed. In the morning the pupils were natural, the pulse 70, and soft; answers some questions rationally; bowels open; less stupor. In the evening his pulse had risen to 80, his face was flushed, his scalp and forehead hot. He was cupped behind the ears to eight ounces, and five grains of calomel were given directly.

9th. Had a bad and restless night; very incoherent at intervals; bowels freely moved in the night; evacuations offensive and greenish; pulse this morning 80, soft and compressible. Answers questions more rationally; more easily roused; there is yet, however, a dull, heavy expression of countenance. Less heat about the forehead and surface generally; pupils less dilated, but influenced by light. The mixture and cold lotion to be continued. In the evening, as the heat about the forehead had increased, twelve leeches were applied to the temples.

10th. Has passed a better night, slept soundly. Is more rational and composed; generally improved; pulse 80.

Emp. Cantharid. nuchæ. rept.

11th. Has intelligence enough to know he is in the hospital. Tongue clear and moist; pulse 75. The mixture and lotion to be continued.

12th. Rather more drowsiness, but in other respects the same as yesterday.

13th. Has passed a restless night. Temperature of the head increased; delirious at intervals, at other periods answers rationally; bowels open; pulse 90, soft. Twelve leeches to the temples. Continue the lotion.

℞ Hydrag. Submur. gr. iij. 3tia quaq. horâ.

14th. In a very low state; pulse 60, and feeble; heaviness and stupor; pupils still dilated, but contracting on exposure to light; bowels open; slight salivation. Calomel discontinued. Sinapisms to the feet, blisters to the calves of the legs at bed-time, ice to the head.

15th. Much better; nearly sensible; pulse 90, but feeble; gums tender. To have the saline mixture.

16th. There was more excitement towards evening, and the pulse rose to 110; eyes somewhat reddened; face flushed; talks incoherently; pupils more contracted.

Hirudines viij. tempor.
Emp. Cantharid. nuchæ. rept.
Lotio. Frigid.

26th. He went on improving until this date, when some stupor and weakness were his chief complaints.

29th. Pulse natural; suffers from weakness, but his appetite is good. The mental powers are diminished; this is a common effect of concussion. He cannot answer many simple questions well; giddy when he walks.

Oct. 5th. He was placed to-day on full diet.

9th. He is now convalescent, but still is slightly affected with noise in the ears;

some dullness and stupor, with weakness of intellect.

This case, gentlemen, affords a good illustration of the symptoms and treatment of concussion of the brain. In the first stage there was the general insensibility of the whole system, and prostration of the vital powers; the patient not feeling the injury even when the skin was pinched. The extremities were cold; the pulse at the wrist imperceptible; breathing slow, some little stertor and labour in respiration, but not such as occur in compression. The beginning of the second stage was denoted by a reaction commencing, and the collapse lessening. A degree of sensibility returned, he felt the injury if the skin was pinched, but he lay with considerable stupor about him, and inattentive to slight external impressions. Only answered if roused or spoken to in a loud tone, and not always coherently. The third stage was illustrated by the occurrence of symptoms denoting more or less inflammation of the brain or its membranes—the most important stage.

These three stages vary considerably in degree and duration, but are more or less observable in every case, where the brain has been violently shaken. I have told you, that our patient vomited and had some retching. These are common effects of concussion, but are principally seen in the early stage, just about the period when the stunned state is about to go off. You have heard, that at one period there was great difficulty in procuring evacuations from the bowels, and calomel with the croton oil were prescribed. The intestinal canal is generally torpid, till the nervous system recovers its influence. At first, you will remember, the pupils were different, the right being dilated, while the left was in a natural state; afterwards both were dilated: the iris in each, after a time, becoming capable of slow motion, and the pupils by degrees became natural. Generally, when the patient is not totally insensible, the pupils will contract on exposure to light, and after inflammation has come on, they may contract in a greater degree than natural, provided the insensibility directly caused by the concussion has ceased.

In cases of concussion, when the shock has been excessive, there is no re-action; the pulse becomes more and more feeble, irregular, and intermitting, and the action of the heart ceases.

In the treatment of the different stages you have in this case a good illustration. In the first stages, the powers of life, the circulation, and the functions of the nervous system were so interrupted, that Mr. Hallam very judiciously employed external, and even internal stimuli.

In the second stage. The cold lotions to the head, bleeding generally, also by leeches and cupping; blisters, saline medicine, with tartar emetic, were indicated.

And in the third stage, antiphlogistic treatment, with the quick exhibition of calomel.

Reports of Cases Treated in the Philadelphia Hospital at Blockley. By W. W. Gerhard, M. D., one of the Physicians.

The Philadelphia Hospital at Blockley, is under the direction of the guardians of the poor, and is destined for the reception of a large proportion of the sick poor of the city and county of Philadelphia. It is one of the largest American Hospitals, and contains one hundred and fifty beds for medical patients, besides an extensive Lunatic Asylum, large Surgical Wards, and an Infirmary for Sick Children and Lying-in women.

The medical service is entrusted to four attending physicians, four attending surgeons, and two accoucheurs. The physicians are on duty for six months each, and take charge of one half the medical and insane patients; they are expected to make daily visits to their respective wards; the surgeons retain the control of all the surgical wards, each being on duty three months in every year.

The attendance of the physicians would afford the necessary facilities for clinical instruction, were it not impeded by the arrangement of the course of medical study during the winter months.

A single morning in each week is devoted to the purposes of clinical medicine, a very insufficient time, even if the pupils were thoroughly prepared for this part of their studies. It was, therefore, necessary, during the past winter, to limit the lectures at the hospital to the indication of the more prominent symptoms of each disease, when the patients were brought before the class. Numerous examples of the more common diseases were presented, and such affections as were more rare were the better impressed upon the memory by frequently presenting them to the class, and afterwards comparing them with examples of those diseases with which they might most readily be con-

founded. The mode of treatment which seemed best suited to the case was directed. If the issue was unfavourable, the pathological appearances found after death were demonstrated at the succeeding lecture; if the disease continued, the patient was again presented, and any important changes in the treatment or the symptoms were mentioned at each successive lecture, until a complete cure.

Imperfect as this course was, in consequence of the embarrassment arising from instructing persons who visited the hospital too rarely to follow the complete progress of a single case, it is believed that some good was effected. Numerous specimens of diseases were offered, and the attention of the students was earnestly and constantly directed to the study of the facts presented by nature and to the logical deductions to be drawn from a comparison of these facts with each other. This method resembled very closely that pursued by Dr. Louis at La Pitié, at Paris.

During the winter there were opportunities of pointing out some diseases which are rarely well understood in America. These were the typhus fever or the dothinenteritis of some of the French writers, as distinguished from other affections attended by great prostration; there were several cases of cerebral disease, some of the rarer tubercular diseases, and numerous examples of the lesions of the heart or large vessels. The more common affections, as those of the lungs and of the abdominal viscera were illustrated by numerous examples and frequent anatomical demonstrations.

The lectures were generally given by Professor Jackson, senior physician o the hospital, assisted by Dr. Pennock and the author.

During the summer months, the method pursued is a little different. The visits are made daily by Dr. Pancoast and the author, who gives occasional clinical lectures and instructs a class in the practical observation of disease. The facilities for medical instruction are, therefore, nearly as great as in the best European hospitals, and superior to those found in most of them.

General Character of Diseases during the months of November, December, January, and February, 1835-6.—The registers were not regularly kept, until the 1st of January. The cases noted, were limited to such as offered sufficient interest for the subjects of a clinical lecture. Amongst these were numerous examples of phthisis in different degrees of developement, some cases of disease of the heart and of the brain, but very few acute inflammations of the chest or of the abdominal viscera.

In January and February, the admissions for acute diseases were more frequent, and there remained numerous examples of chronic affections. Gangrene of the lungs, of which there were several cases in the earlier part of the winter, was not again witnessed. The common inflammatory pneumonia had been very frequent during the winter of 1834-5; but the cases of this disease admitted during the past winter were more obscure, and resembled the lobular pneumonia so frequent at the close of typhoid fevers, and at the termination of numerous infantile diseases. This variety of pulmonic inflammation retained its type during the winter months and throughout the spring, so that common, well marked inflammation of the lungs rarely occurred.

Bronchitis was rare at the beginning of winter, but numerous cases occurred in the variable weather of January and February, some of them simple cases of catarrh, a larger number were those of acute inflammation of the bronchial tubes, supervening on chronic catarrh, emphysema of the lungs or tubercles.

During the winter months there occurred eight or ten cases of mild dothinenteritis or nervous fever, none of which terminated fatally. Besides these cases, which were well characterized, I witnessed some examples of an anomalous fever, which I had never met with in the Parisian hospitals, and had not seen in Philadelphia during the preceding two years, although residing in a large hospital. The prominent symptoms of this fever were great prostration, subsultus, delirium, coma, and aberration of the senses, but neither diarrhœa, tympanitis, nor the rose-coloured spots of dothinenteritis. The sporadic cases were the forerunners of the epidemic of typhus or spotted fever, which has prevailed during the months of March and April, and still continues amongt the negroes.

The first series of observations will include those of gangrene of the lungs, of which there were several cases.

Case I.—Mahorter, a white man, about 26 years of age, of intemperate habits, but never without a sufficient supply of food; was engaged in selling oysters in the open air on the 9th of October, and had previously been in perfect health.

He was a little weaker than usual, but had no cough; his neighbours remarked that his breath smelt badly before he was himself conscious of any unusual smell. In the afternoon he lost his appetite and vomited; from that time anorexia, loose cough, fœtid breath, and expectoration nearly similar to that observed at his admission; he had afterwards chills, followed by fever and pain at the base of the right axilla. He was not obliged to keep his bed, and took nothing but some simple medicines. Entered, October 15; at his entrance was cupped on the thorax, and was ordered a laxative.

On the 16th I saw him for the first time. He was small and not muscular; face slightly flushed; eyes natural; sleep good; intelligence and other cerebral functions unimpaired; considerable oppression; some pain at the base of the right axilla; decubitus on either side; cough short and loose; expectoration reddish, thin, slightly fœtid; respiration rather high, 28 in the minute; sub-crepitant and crepitant rhonchus abundant in the lower two-thirds of the right side; there is no brochial respiration, but the resonance of the voice is a little increased about the root of the lungs; flat sound on percussion at the inferior and posterior part of the side; pulse 130, full; skin moist; no chills; thirst increased; appetite much diminished; bowels freely opened by the oil; tongue reddish and smooth at the edges, whitish and rather dry at the centre. Venesection to ten ounces. Morphia mixture, one grain to six ounces of mucilage; broth; bread; tea.

On the 17th the sputa were browner and thinner, and, like the breath, were more offensive than before. Mucous rhonchus and gurgling at the lower part of the right lung, near the spine.

On the 20th, the sputa dark, very fœtid, and streaked with blood; the gurgling was more marked, and there was loud bronchial respiration and bronchophony at the root of the right lung. The appetite was better; the pulse 84; respiration 28.

On the 22d the respiration had fallen to 20 in the minute. On the last-mentioned day there was cavernous respiration, gurgling, and well-marked pectoriloquy throughout the lower third of the right lung.

On the 23d the sputa consisted of a greenish, fœtid liquid, in which were rounded purulent masses. The fœtor had sensibly diminished; the gurgling was rather more liquid; in other respects the stethoscopic signs were unchanged.

The expectoration consisted entirely of mucu-purulent liquid, running together into a uniform mass, and was nearly free from fœtor. The pectoriloquy was more perfect, and the cavernous respiration less marked by liquid gurgling on the 26th. The quantity of expectorated liquid was still from ten to twelve ounces. In the night of the 26th to the 27th, he slept badly, and had some increase of pain in the side, the cough became more frequent, and the sputa greenish and very fœtid. Pulse 100; respiration 20; skin very hot; the gurgling ceased entirely, and the cavernous respiration became louder. A little neutral mixture was added to the other prescriptions.

On the 29th the temporary increase of fever had ceased; the pulse was at 76; skin cool; thirst natural; expectoration more purulent; gurgling louder, more liquid, and very distinct cavernous respiration.

The expectoration from this date gradually became less fœtid, and more purulent, so that on the 5th of November the sputa were composed of well formed pus. In quantity they varied from six to eight ounces. The physical signs did not vary, except the gurgling, which was less and less distinct. The skin became pale—rather shrivelled; there was considerable emaciation, but not very great weakness. About Christmas, the strength of the patient was sufficiently recovered for him to be employed in the ward as an assistant. He continued in an out ward, capable of doing nearly a full day's work, and was finally discharged from the service of the institution in May. He was, therefore, more or less under my inspection for some months after his entire recovery. I made numerous examinations of the side of the chest affected, and observed the following changes: The cavernous respiration diminished gradually, but was still perceptible near the root of the lungs, until the end of the winter, when the respiration was merely a little blowing, but without the vesicular murmur indicative of a restoration of the healthy state of the lungs. The flatness on percussion continued, but it was in a less degree, and there was a little resonance of the voice. The expectoration gradually became mucous, and ceased entirely about the end of the winter.

Remarks.—This case is an unequivocal example of idiopathic gangrene of the lung, extending to the greater part

of one lobe. The sputa, the fœtor of the breath, with the gurgling and cavernous respiration, proved that the gangrene had been followed by a cavity of considerable extent. As long as the mortification advanced, the sputa consisted solely of the liquid proceeding from the sphacelated tissue of the lung, a portion of which, of a dark brown colour and very fœtid, was expectorated with the liquid. When the progress of the gangrene was arrested, and a false membrane began to form on the interior of the cavity, the sputa became purulent, and resembled the secretion from the parietes of a cavity which might follow gangrene in any part of the body. As long as the membrane lining the cavity secreted pus, this aspect of the sputa was continued; but, as cicatrization approached and the secretion of pus ceased, the character of the expectoration resembled, very nearly, the ordinary secretion of simple catarrh. When the sputa changed from pus to mucus, the loose liquid gurgling, observed at an earlier stage, was replaced by a strongly marked cavernous respiration, which continued as long as the expectoration was abundant. The physical signs of the lesion, therefore, coincided very closely with the variations in the sputa, and with the progress of the natural symptoms, throughout the whole course of the gangrene. Thus, the physical signs confirm and give greater precision to the rational symptoms.

After entire recovery had taken place, the respiration never returned to its normal state, but remained feeble and always a little blowing. These phenomena probably arose from the induration of that portion of the lung which immediately surrounded the gangrene after the cicatrization and partial obliteration of the cavity, as the air scarcely enters the pulmonary vesicles after the contraction which follows the natural process of cure. The percussion was necessarily dull, for the same reasons which rendered the sound of respiration feeble.

The treatment throughout the progress of this case was extremely simple, and directed in such a manner as to favour the natural progress of cicatrization. At the entrance of the patient, ableeding and cupping were directed, in order to remove the pain caused by the inflammation of the pleura, consecutive to the gangrene. As soon as the pleurisy ceased, no other medicines were given, except an anodyne mixture to allay the frequent cough, with a tonic infusion towards the termination of the case. The diet, at first, consisted of broth and vegetables, and, when cicatrization had commenced, an allowance of meat was given. All means which might have debilitated the patient were sedulously avoided, as the evident anatomical lesions could only be remedied by allowing sufficient time for the process of cicatrization to become complete. Its progress was carefully watched, and my object was simply to avoid all accidents which would check its course.

Case II.—*Gangrene of the lungs in the upper lobe—Distinct gurgling and other signs of a cavity—Fœtid breath and expectoration—Feeble and blowing respiration after cicatrization.*—Thomas Powell, æt. 34, an Irish labourer, of rather intemperate habits, was admitted into the hospital at Blockley on the 12th of November, 1835. He has always enjoyed excellent health, with the exception of an attack of typhus fever, sixteen years ago, in Ireland, and another of intermittent, about ten years afterwards, in America.

He was working on a railroad during the summer, and continued drinking freely of spirits and sleeping in badly warmed cabins. On Thursday, three weeks before his entrance, he fell asleep in the open air, and was wet with rain; during the next two days he felt chilly, and lost his appetite; on the Sunday the cough began, but he suffered no pain until the middle of the following week, when he felt much soreness across the chest. The cough constantly increased. The expectoration began a week after the cough, by the sudden discharge, as if by vomiting, of three gills of very dark blood; the sputa afterwards resembled in aspect and in fœtid smell those observed at his entrance. The sleep was interrupted by the frequent cough, which was increased by lying upon the left side or on the back; no chills or cold sweats at night; great thirst, anorexia; dyspnœa much increased by active exercise; slight diarrhœa. His strength gradually diminished, but he did not quit his work until the hæmoptysis occurred. Emaciation gradual.

Nov. 13th.—Present state. Slightly emaciated, but of large muscular frame. No peculiar colour of skin; the face is flushed and a little livid; strength sufficient for a walk of several miles; no œdema; intelligence and cerebral functions in a normal state; tongue clean, rather reddish and smooth. He has no bad taste in the mouth, except on cough-

ing. Appetite had not been destroyed; thirst nearly natural. Abdomen soft, not tender on pressure; stools natural. No chills or sweat; cough moderately frequent, rather dry; the expectoration is thin and watery, with floating rounded sputa, consisting of pure pus and very fœtid; breath fœtid; no pain in thorax; decubitus on the right side is preferred, but he can now lie on his back. Pulse 92, rather full; respiration 25, regular.

The chest is well formed; percussion flat in the upper two inches of the right side at its anterior part, and in the upper half posteriorly; in the lower portion at least as sonorous as usual. The resonance is natural throughout the left side; the respiration is pure and vesicular throughout the left side, a little rough near the clavicle. On the right side the respiration is bronchial near the clavicle and in the posterior and upper part of the lung, where there is some liquid rhonchus; in the rest of the lung it is natural. Pectoriloquy near the summit of the right lung. Venesection ℥x. Morphine mixture, vegetables, and soup.

On the 16th, the pulse had fallen as low as eighty in the minute; respiration 20. The patient is gay, walks about, face rather pale, skin cool. Expectoration purulent, thick, running together in masses; cavernous respiration (well marked in both inspiration and expiration) in the upper anterior third of the right side, followed by a little crackling after coughing; at the posterior part the cavernous respiration is still more distinct in the upper two-fifths.

During the next two months, the patient presented one of the most evident examples of pectoriloquy in the ward, and, on that account, was often pointed out to the pupils. In February, the sputa began to diminish in quantity, and the cavernous respiration was less loud.

In March the expectoration ceased, and the respiration at the upper part of the right side was feeble, though without vesicular sound, and a little blowing, both in the inspiration and expiration. These characters continued during the residence of the patient at the hospital, and probably did not afterwards disappear. He was discharged from the ward in March, and left the house in April.

The *diagnosis* of this case, at first, might have been doubtful. The situation of the cavity at the top of the lungs and its small extent, rendered it similar to tuberculous excavations, but the odour of the expectoration and of the breath, the rapid formation of the cavity and the speedy recovery of the patient were sufficient evidence that the case was one of gangrene of the lungs, passing through its stages rapidly and terminating in recovery, as soon as the restoration of the sphacelated portion of the lung could be effected. The data for the diagnosis, were, therefore, nearly as complete as they were in the first case, and the precision with which the progress of the lesions could be traced, was nearly as great.

The *treatment* was simple, a single bleeding to relieve the pleurisy and bronchitis, which complicated the gangrene. Afterwards, anodynes were directed, to allay the cough, and a light tonic infusion towards the close of the disease. The diet was liberal throughout.

Case III. *Gangrene extending to the lower Lobes of both Lungs—abundant grayish fœtid Expectoration—Gurgling and Cavernous or Bronchial Respiration at the base of the Lungs—Entire recovery.*—A man, 36 years of age, of large frame and well marked muscular developement, was admitted into the Pennsylvania Hospital on the 13th of November, 1834. He was employed at various kinds of labouring work, and was last engaged in digging sand in the Delaware river. He had been severely ill but twice, once in the winter of 1820-21, of a disease which was apparently some form of typhoid fever. He was ill again in the summer of 1826, when he kept his bed three weeks, with severe cutting pain in the bowels, frequent stools, pain and tumefaction in the pericordial region, short breath and difficult decubitus on either side. Slight cough and expectoration of yellowish sputa, once or twice mixed with blood. He recovered from this complaint (pleuropneumonia?) but, though he is not short breathed, he cannot work as long as formerly.

On the 10th of November, he was quite well, came on shore and drank some spirits and porter. In the evening he was taken with pains in the limbs, vomiting, and purging; extreme thirst—(spasmodic cholera)—was relieved at his entrance, after taking a few doses of laudanum and using various external applications. On his recovery from cholera, he was attacked with delirium tremens on the 17th of November, (great restlessness, tremors, and seeing strange objects;) he was treated by opiates; (twenty drops of laudanum every two hours;) slept well, and recovered. He coughed a little be-

fore the attack of delirium tremens, but the resonance on percussion was good on both sides of the chest, and the respiration was pure and vesicular. On his recovery from this disease, the cough was much more frequent and the expectoration presented the characters afterwards observed.

On the 23d, the respiration was pure, except a little mucus at the root of both lungs. Pulse 80; skin cool; nutritious diet; anodyne mixture; sinapism to the chest.

29th. The skin was of a dusky livid hue, and cooler than natural; the hands wrinkled like those of a washerwoman; lips livid; eyes dull; his intelligence good and sleep natural, except from the cough, which comes on in paroxysms, followed by the expectoration of a dirty greenish-gray mucus, at least twelve ounces in the twenty-four hours, like the breath, of a very fœtid odour; tongue clean; appetite indfferent; constipation. Pulse 80, rather feeble, but regular; respiration 16; other functions not altered. The percussion was very sonorous, on both sides, throughout the whole chest; the respiration was pure and expansive, except at the lower third of each lung, where there was an abundant mucous or sub-crepitant rhonchus.

On the 2nd of December, the bronchial respiration was loud, and combined with mucous rhonchus at the lower third of each lung, especially the right, and on the 7th, there was loud cavernous gurgling from an inch below the spine of the scapula to the base of the lung, with strong cavernous respiration, so that the air seemed almost blown into the ear from the chest. On the left side, there was gurgling and bronchial respiration, extending from the base, but much less intense than on the right. The percussion was very obscure in the lower parts of each side of the chest, but elsewhere it was sonorous, and the sound of respiration was nearly natural. Pectoriloquy and bronchophony were observed at the seat of the cavernous and bronchial respiration. On the 26th, the gurgling and bronchial respiration had sensibly diminished. On the 6th of January, at the left side, the respiration was vesicular, but feeble, except very near the base of the lung, where there was a little subcrepitant rhonchus. There was still an imperfect bronchial respiration at the middle part of the right side, with a few bubbles of mucus; in the lower third there was a suberepitant rhonchus; the resonance of the voice was moderate and normal, except at the lower and posterior part of the right side.

At his discharge, near the end of January, the respiration was of natural strength, except at the lower third of the right lung, where it remained feeble and blowing. The expectoration retained the fœtor and grayish-yellow colour until the 23d of December, when it became less fœtid, and of an opaque white. It increased to nearly a quart in the twenty-four hours about the 20th of December, and from that time gradually diminished until the middle of January, when it ceased. The pulse was never more than 80 in the morning, but a little increased in frequency towards evening. The respiration was never more than twenty-four in the minute. The appetite was always bad. One slight attack of diarrhœa at the beginning of December.

The treatment consisted of an anodyne mixture to allay the cough; porter, port-wine, oysters, and full animal diet, with the solution of the chloride of soda, in quantity equal to forty drops of Labarraque's solution, three times daily.

Remarks.—The duration of this case of gangrene of the lungs was nearly forty days; there was little fever, and no other evidence of inflammatory reaction during its course; the pale, bronzed and shrivelled aspect of the skin indicating a deficient supply of red fluid, as well as a change in its composition. The disease occurred in a patient enfeebled by an attack of spasmodic cholera, and with a constitution deteriorated by his intemperate habits.

The extent of the cavities included the whole lower lobe of the right lung, and at least half the lower lobe of the left. Their formation was marked by the gradual passage of the sub-crepitant into the mucous rhonchus, and finally into gurgling and cavernous respiration. These changes in the sounds of the respiration coincided with the increase in the quantity of the expectoration. As the disease advanced towards a cure, the gurgling was gradually replaced by a mucous rhonchus, and finally disappeared; a feeble vesicular respiration was then heard over the affected portion of the lung, which was probably owing to the conducting properties of the hardened tissue around the cavity. The expectoration was never very dark nor very liquid, unlike its usual appearance in this disease. The treatment was limited to the administration of opiates, and to full nutritious diet, with

porter and wine, and afterwards the sulphate of quinine. The chloride of soda seemed to diminish the fœtor of the expectoration, and was of some advantage. The influence of the other remedies was much more obvious, and in all probability prevented the death of the patient. The indication for the use of tonics and nutritious food was even more unequivocal than in the other cases, as the pulse was not frequent and the skin was cool and wrinkled from want of a sufficient supply of blood in the capillary system. The case affords a striking illustration of the powers of resistance of the system, when assisted by proper remedial agents.

(*To be continued.*)

On Vesico-Vaginal Fistulæ, and on a new Method of Treating them. By M. Jobert.

These fistulæ are both congenital and accidental; the former, very much more infrequent than the latter, and arising from a want of development of the parts intervening between the bladder and vagina. The accidental vesico-vaginal fistulæ vary in their seat, their form, and the causes which give rise to them. These causes may act either from within the bladder upon the vagina, or inversely, or may originate within the uterus; and, lastly, these fistulæ are sometimes owing to the use of certain instruments. In the first class of causes may be mentioned pins, which penetrate from the bladder into the vagina, and calculi which destroy the partition between them. To the second belong pessaries, cancer, syphilitic ulcers. To the third (and this is by far the most frequent), the descent of the head of the child, and the consequent pressure upon the vesico-vaginal partition. Among the causes of the fourth class may be arranged the use of dilaters; the perforator; bruised pieces of bone; instruments applied to the vesico-vaginal septum, in order to remove calculi, &c. Of the efficacy of all these causes in producing fistulæ between the bladder and vagina there are proofs recorded by various authors.

Pathological anatomy.—Whether the fistulæ occupy the neck of the bladder, or are in the neighbourhood of the cervix uteri, or, as is most commonly the case, they are situated between these two points, they may be limited to the partition; but they often extend right and left, and then the vagina is consequently destroyed in a greater extent than the bladder. It may be stated, as a general rule, but not without exception, that the bladder is in these cases less open than the vagina. In the first stage there is an eschar. After an uncertain interval, by the separation of this eschar, an aperture is formed, through which the urine passes. Lined by an accidental membrane, which is continuous with that of the bladder and vagina, these fistulæ undergo changes in proportion to the length of their existence. They become dense and resistant, and establish a true continuity between the bladder and vagina. The filamentous cellular tissue which exists between the vagina and bladder becomes intimately united with them in consequence of inflammation. The blood-vessels are obliterated to the extent of a line around the cicatrix, and in the same point; the cellular, muscular, and mucous tissues of the bladder, are confounded and become dense and closely connected. The vagina, at the cicatrized part, is hard. The mucous membrane is thickened and rough: indurations take place in its parietes. When the fistula approaches the cervix uteri, the inflammation extends to the peritoneum; it gives rise to the formation of false membranes and consequent adhesions, which prevent the infiltration of the urine. The bladder, no longer a reservoir of urine, which escapes as soon as it enters this organ, contracts; and the urethra, its function being stopped, is diminished, and eventually its caliber obliterated.

Symptoms.—The ordinary characters of urinary fistulæ are found to exist. They are round, transverse, or longitudinal. The first are sufficiently common; the second are more frequent, the last are the rarest of all. The extent of these fistulæ is very variable: in some instances being only a few lines in length; in others occupying the whole partition. When the connexion between the vagina and bladder has been made by a cutting instrument, the urine immediately escapes by the former; not so, however, when the fistula is the result of a tedious labour. The partition loses its vitality, the parts swell, inflame, and there is consequent retention of urine, requiring the use of the catheter. The eschar must separate before the urine escapes. The time occupied by the separation of the eschar is variable; after two days in some, in others not until eight or ten days have elapsed. When the fistula is large, the urine escapes as soon as it is received into the bladder; but, on the contrary, when

small, or when occupying the neck of the bladder, the urine escapes partially, and the patient is aware of its passage through the vagina. The position of the patient influences the flow of the urine. In some cases it ceases in the upright, in others in the horizontal posture. When the fistula occupies the neck of the bladder, the urine may be retained a considerable period, but never beyond two hours, and in this case the horizontal position is the least favourable to its escape. The relation also which is borne to the borders of the fistula by contiguous viscera modifies the passage of the urine; thus, the pressure of the uterus and of the small intestine, tends to obliterate the aperture by the approximation of its sides. Walking, voiding the fæces, cough, menstruation, are all conditions, which facilitate and increase the course of the urine by the vagina. The contact of the urine with the interior of the vagina and thighs is a cause of great inconvenience, and sometimes of worse effects. It is doubtless an occasional cause of cancer of the generative organs; it produces ulcers of the vagina and thighs, and a constant state of turgidity of these parts, with erysipelas and eruptions of various characters. The common effect of it is to render the individual so disgusted with herself that she lives entirely alone. Calcareous concretions may accompany vesico-vaginal fistulæ, deposited by the urine, and they produce great pain and ulcerations of various extent. Some patients are the subjects of obstinate constipation; possibly owing to a contracted state of the fibres of the rectum, in consequence of the incipient escape of the urine by the vagina. These fistulæ may be accompanied by indurations, by circular contraction of the vagina, by bands across the vagina, by destruction of the anterior and posterior parietes of the vagina. It is said, that the urine may be poured into a species of sack, formed between the laminæ of the vesico-vaginal partition; but this, of which there is only one case on record, must be necessarily very rare.

Diagnosis. When the fistula is formed, this is sufficiently easy; but it is less easy to say with certainty whether or no it will occur. It is difficult to ascertain whether gangrene has happened during laborious delivery; if ischuria should follow, it cannot be until after the separation of the eschar that it can be known to depend on the formation of fistula. Now, the time for the separation of the eschar is very variable; sometimes not until the tenth or twelfth day after delivery, and a case is mentioned in which a month elapsed before the urine made its escape by the vagina. Occasionally, after labour the neck of the bladder does not quickly recover its contractile energy. Some women, indeed, throughout life, can with difficulty retain their urine, which escapes by drops when they lie down. This urine, passing into the vagina, and again escaping, presents exactly the same appearance as a fistula. The introduction of a catheter will immediately decide the point, if it be not settled by the return of the parts to their normal functions. To distinguish a communication between the vagina and bladder, pass the finger along the anterior paries of the former, and any loss of substance will thus be recognised; a coloured injection may then be forced through a catheter into the bladder, and, the finger being within the vagina, will feel the escape of the fluid by the aperture. A sound introduced into the bladder may be felt through the fistulous opening, by passing the finger into the vagina, or a sound may be passed into the bladder through the fistula in the vagina. The speculum is a valuable instrument by which to ascertain the form, situation, and extent of the fistulous structure; and, by its means, fistulæ may be detected which might escape other means of investigation.

Treatment.—The transverse fistulæ are in general considered as the most difficult to cure. The indications of treatment are different, according to the object which is aimed at; whether it be the complications of the disease, or whether palliative means only are employed, or an attempt is made at a radical cure.

Treatment of complications.—It is necessary to moderate the inflammation of the bladder and vagina by appropriate means; by baths, enemata, emollient cataplasms, copious demulcent drinks. The gravelly incrustations which sometimes take place in the vagina must be removed by frequent injections or other means, and proper medicines be employed, as much as possible, to prevent their formation, as they would much interfere with the success of an operation. Every effort must be made to produce a favourable condition of the general health, previous to any operation being performed.

Curative Treatment.—To effect a radical cure, two principal methods have been followed; one by mediate or secondary reunion; the other by immediate reunion. Several procedures have been

recommended, in order to effect the immediate or secondary reunion: 1. cauterization; 2. the method of Desault; 3. that of Jules Cloquet. The means employed to produce immediate union are—1. suture; 2. the approximation of the borders of the fistula by uniting instruments; 3. the method of the present author, and which is an application of élytroplasty. We pass over the description of the various means which have been employed with such various degrees of success, to the method of M. Jobert, to which he was led by a careful examination of the previous methods of treatment by surgeons, a conviction of their manifold imperfections, and the serious inconveniences which are connected with them. The object of M. Jobert is to cut a flap, to supply the lost substance; to keep it in its place, and to re-establish the proper current of urine. It is necessary, 1. to renew the borders of the fistula; 2. to cut a flap; 3. to employ a suture; 4. to re-establish the course of the urine. By careful traction, the vesico-vaginal septum may be drawn out, and the borders of the fistula be there incised. This may sometimes be effected by a finger introduced into the fistula. M. Jobert commonly employs the hooks of Museux, by which he seizes either border of the fistula, and pares it, beginning with the posterior, and finishing with that which is nearer to the urethra. For this, a probe-pointed bistoury, or the scissors employed by M. Roux in palate-suture, may be used. The whole border of the fistula must be carefully pared. One of the valves of the author's speculum is advantageous to guide the hooks to the lips of the fistula. The flap may be taken from the external labia, from the adjoining parts, or from both. Its size must be proportioned to that of the fistula. It is better that it should be somewhat larger (but not much), as it then possesses more vitality, and is less likely to mortify. The hairs must be first shaved, and the flap, when cut, so twisted on itself that the bleeding surfaces may be brought in contact. The pedicle should be of considerable size, and attached to the point which is nearest to the vagina. It should be of sufficient length, not at all to pull the vagina, and to allow freedom to its circulation. It must not consist solely of skin; in this case, gangrene easily occurs; but some of the subjacent tissues must be removed at the same time. The operation must be delayed if the health is not good, or until any ulcerations of the vagina have been cured. Should there be any bands crossing the vagina, they must be divided.

In order to cut the flap, the integuments of the labium being stretched with one hand, an incision must be made on its external side, from above downwards; and, when this has been carried to a sufficient extent, the knife being turned, must be carried to the internal surface of the labium, on a level with the commencement of the incision. The flap has then a rounded extremity, and is fitted for large fistulæ. The flap may be made by two incisions instead of one; each one commencing above, and uniting beneath, at a more or less acute angle. This is more appropriate to smaller fistulæ. Then dissect the skin, and with it some of the subjacent tissues, from without inwards, and from the extremity towards the pedicle of the flap. Any arteries which bleed on the surface of the wound should be tied. In women whose vitality is very active the flap contracts into numerous folds. The pedicle should be somewhat larger than the flap itself; for it is essential for its union with the borders of the fistula that its circulation should be free. As the flap is disposed to contract during its suppuration, M. Jobert prefers to take it not only from the labium, but from the neighbouring parts, by extending his incisions. Where the woman is fat, it is better to make the flap entirely from the larger labium; for the object should be to obtain a flap consisting of skin and the subjacent vascular tissue, rather than of much adipose tissue. In order to introduce the flap into the fistula, M. Jobert doubles it up, and traverses its extremity by a waxed thread. He then introduces a catheter into the bladder, through the urethra, and directs its point into the vagina through the fistula. He then passes the two ends of the thread through the eyes of the catheter. Withdrawing this, he next disengages the thread from the instrument; and then, by pressing with one hand upon the flap, and by drawing the thread with the other, he brings it to the fistula.

The next step in the operation is the suture. The finger being introduced along the flap, a curved needle mounted on the needle-bearer employed in palate-suture, is then passed above it, or the needle may be directed by the hand alone. By one effort the needle is passed through the flap and the borders of the fistula, and is withdrawn with its thread by means of a pair of dressing forceps.

The same suture is then made at the opposite angle of the fistula. It is of the greatest importance that the flap and the angles of the fistula should be both comprised in one noose of thread. The threads being passed, must be tied, and allowed to project externally. They separate in about fourteen days, but sometimes later. The urethral thread, which is attached to the summit of the flap, must be fixed in such a manner as to bear nothing during the movements of the patient. M. Jobert attaches it by diachylon plaster to one of the thighs.

A catheter must now be introduced into the bladder. If, in so doing, it come in contact with the flap, it must be turned on one side. A second catheter must be added to the first, to carry off the urine from the wounds which have been made. The catheter must be always open, and supported by cotton threads, attached to a bandage passing round the body. Constant repose in the horizontal position must be enjoined, in order that the bladder may not be irritated with the catheter; and that it may be retained as long as possible. The pedicle of the flap must remain undivided for a considerable period. M. Jobert divides it, between the thirtieth and fortieth day; but, in determining on the proper time, due regard must always be paid to the constitution and degree of vitality of the individual. The necessity of this delay is explained by the density of the tissues about the fistula.

As soon as the operation is terminated, some blood escapes into the bladder, and passes through the catheter: the same takes place in the vagina. The raw surface of the flap becomes covered with a layer of lymph; the urine is turbid, because of the pus which is secreted by its summit. This state of the urine varies as to its duration; enduring sometimes twenty-five days. More or less blood flows on the section of the pedicle, and one portion of it retracts towards the vagina, the other towards its root. It is liable to become inflamed from the contact of urine with its exposed surface; it swells, becomes red, and extends beyond the entrance of the vagina. Suppuration takes place, but, as this ceases, the inflamed portion retires gradually towards the vesico-vaginal septum. The flap entirely loses its sensibility: but the skin retains its structure, and hair grows upon it as before.

The experience which M. Jobert has hitherto had of the beneficial results of this operation, is founded on three cases; in two of which the operation succeeded; in the third, death took place in consequence of phlebitis; but, in the examination of the body, the union between the flap and the fistula was found to have established itself.—*British and Foreign Medical Review, Oct.* 1.

The preceding account is very instructive so far as it goes, although the author has omitted to notice a less painful mode of curing certain vesico-vaginal fistulæ, first successfully employed in this country by Dr. Ryan, and described by him in 1832,* and afterwards by M. Velpeau in 1835.† This method consists in plugging the vagina with oiled lint every day, and thereby preventing the constant irritation of the urine on the vagina, and placing the patient on the abdominal surface or face, or sides, so as to allow the urine to collect on the sound part of the bladder, and then drawing it off whenever there is a desire to micturate, unless it passes by the urethra. In some cases the catheter is constantly worn with or without the stilet, so as to allow the urine to escape as fast as it arrives in the bladder, so that the latter organ will be kept nearly empty, its cavity diminished, its parietes almost in contact, and the edges of the fistula brought in close approximation, so that they may finally unite and obliterate the opening.

It must be obvious to every surgeon, that it is most essential to remove the cause of irritation, inflammation, or ulceration, to effect a cure. This is done by change of position, and the other means already mentioned; and these are much preferable to caustic, cautery, or sutures, which ought not to be employed until every other method has failed. We have now a lady under treatment who came four hundred miles for the purpose, and we hope to cure her, though twelve months affected, without sutures or the cautery.

NEW FARTHING CLUB; OR METROPOLITAN INFINITESIMAL DISPENSARY.

(From the *Medico-Chirurgical Review*, Oct. 1.)

A PROSPECTUS of this important institution has just reached us. It is to be under the direct patronage of a prince of the blood, a distinguished EARL, and many of the nobility and gentry. Its own merits, however, will ensure it uni-

* Manual of Midwifery, 3d Edit. 1832.

† Traite de l'Art des Accouchemens, 1835.

versal approbation and support. The superintendence of the dispensary is placed in the hands of four of the most experienced HOMŒOPATHISTS of this country. It is on a plan so much superior to the penny-clubs, now spreading over the country, that it will soon supersede them all. The subscription is to be only *one farthing* per head per annum! We may calculate that, taking the rich with the poor, there is an annual expenditure, in London, of twenty shillings per head, on medical attendance and medicines—and as the Metropolitan Dispensary will do away entirely with the heavy fees and long bills of physicians, surgeons (excepting for operations), apothecaries, and chemists, the saving to the public of this capital will be more than a MILLION ANNUALLY!!

There can be no doubt that the whole population will subscribe at once; but, under such patronage, a charter of incorporation will certainly be obtained next session, and thus its success will be secure.

Four homœopathic laboratories are to be established, namely, at the Chelsea Water Works, on Primrose-hill—at the New River Head—at South Lambeth—and at Hampstead. From these sources infinitesimal doses of the choicest homœopathic remedies will be daily issued, not only for the cure, but for the prevention of all diseases. Thus it is calculated that, when scarlatina breaks out, a daily solution of twenty grains of belladonna in the Chelsea reservoir, will protect all individuals within the range of that company against the scarlet fever, besides curing those who have actually caught the disease. If cholera reappears, a lump of camphor is to be thrown into each of the four reservoirs, the emanations from which will soon check the Asiatic pestilence*.

The great beauty of the infinitesimal system is this, that each remedy will only grapple with, or prevent those diseases that are of its own nature—"SIMILIA SIMILIBUS CURANTUR." Thus a few grains of aconite daily dissolved in each of the reservoirs, will cure or prevent all the aconite diseases of this overgrown metropolis, without producing any effect on those in health, or modifying any other diseases or remedies.

The saving of money will be the smallest part of the benefits which must flow from this most fortunate discovery. In a few years, all diseases, excepting those resulting from casualties, will disappear, or nearly so, and the value of life will be so enhanced, that the insurance offices will be able to reduce their premiums nearly one-half! The grief, anxiety, and sorrow of families, for the loss of children, &c., will be prevented, as all people will then die the death of Nature, far beyond the obsolete boundary of three-score years and ten.

It is true, however, that there is no unmixed good in this world. Certain orders of society, now flourishing, will be reduced to beggary. The Apothecaries' Company (who are getting up a petition to Parliament against homœopathy) will be ruined by the "atomic doses" of the Infinitesimal Dispensary. The College of Physicians, being ruined already, think it useless to remonstrate. The College of Surgeons, though they will still have the monopoly of operations, are preparing, nevertheless, to petition the legislature, because they well know that, though surgery is their *profession*, physic is the best part of their *practice*. The apothecaries may, of course, shut up shop—and all those beautiful drug-palaces, whose windows, at night, look like constellations of etherial fire—

"Flammisque imitante pyropo"—

must be converted into gin-shops or soda-water manufactories. It is to be hoped that government may, in charity, grant a free passage to Australia for, at least, twenty thousand ALLOPATHICS, who will thus be thrown out of work in this metropolis.

These are little specks of evil attendant on a public—a universal blessing. The homœopathic superintendants have humanely determined to station one of their elèves, with a few small phials and pots, some miles beyond Oxford, in order to medicate the stream of the Thames, for the benefit of the University, Maidenhead, Windsor, Kingston, Richmond, and the various towns along the river as far as Gravesend. It is calculated that a scruple of oxymuriate of mercury and three pints of fluid extract of sarsaparilla, thrown into the Thames at Fulham, will prove a powerful alterative for all those who drink the water supplied by the Chelsea and South Lambeth Companies. A much smaller quantity will do for the New River Head. Infinitesimal Dispensaries will, without doubt, be established in all the great cities and towns of England. And, as the present race of prac-

* See Dr. Uwins's pamplet.

titioners will certainly be the last of their kind, so our great medical schools, and even our hospitals, will shortly vanish from the scene. Homœopathic doses of medicine will naturally require but "atomic doses" of the science on which medicine depends. Indeed we see no reason why, on the homœopathic system, we should undergo the drudgery of studying anatomy, physiology, therapœia, or chemistry A very few medicaments, divided and subdivided into inappreciable tenuity, are endued with the power of penetrating the most minute tissues of the human fabric—with the instinctive sagacity—the more than chemical affinity, of searching out, seizing, and coalescing with their "SIMILITUDES" in these remote recesses,—and there neutralizing their morbid qualities, and expelling them ultimately from the body! If this be not the millennium of medicine, we can form no idea of what a millennium is! HOMŒOPATHY has, we conceive, brought us to the verge of this happy epoch—and the infinitesimal physician is entitled to the infinite gratitude of mankind!

P.S. We have just learnt a piece of curious information. It is this:—Ever since the new Poor Law Act came into operation, a celebrated homœopathist, of this metropolis, has been giving lectures on the infinitesimal art, to pupils who have "passed the Hall," and who are qualifying for the office of "contract doctors" throughout the provincial districts. We have now a solution of the low rates at which these UNDERTAKERS contract to attend the sick poor. The homœopathic system will enable these practitioners to beat the ALLOPATHICS clean out of the field! The training requires about six weeks, and the whole apparatus medicaminum consists of a few bottles of medicated mustard seed, labelled "homœopathic pills." Our informant showed us a single formula, and the *mode* of preparation is the same in all. Five grains of extract of aconite are dissolved in a pint of distilled water, and the solution is poured off clear. Into this is put a pint of white mustard seed. In a few hours the seeds swell and absorb the whole of the solution. They are then spread out in the open air, when they soon shrink back to their original dimensions, being, however, impregnated with the aconite, and fit for use. The dose is from one to ten of these aconite pills. The mustard seed is medicated or imbued with all other articles of the homœopathic pharmacopœia in the same way. The cost of physicking a large parish on the "atomic plan," will, it is supposed, not exceed half-a-crown per annum.

SKETCHES OF THE MEDICAL PROFESSION IN PARIS.

*Deneux, Clarion, Fizean, Guilbert, and Bougon.**

"A calculator was wanted, and a dancer is sent!" Such was the exclamation of Figaro, the victim of crying injustice; and never was a quotation more in point. Picture to yourselves Messrs. Fizean, Bougon, Guilbert, &c. robed in ermine and with professional caps, defiling with becoming gravity under the colonnade of the school of medicine. M. Guilbert speaking in public! Do not laugh; for he considers it a serious matter, and not at all ridiculous. M. Fizean in the place of Pinel! M. Bougon in that of Dubois! This is a delightful piece of mystification, upon which we cannot but congratulate Messrs. Corbière and de Frayssinous; for it is one of their masterpieces. Before the result of the ministerial deliberations was officially made known, many people would not believe it. "It is impossible," it was said; "it would be too barefaced!" To this it was shrewdly replied, "Patience; wait and you will see." We *have* seen. Those who were incredulous, have become mute with consternation. It was, nevertheless, a very simple and natural thing to every one who had eyes. At a time when M. de Peyronnet held the balance of justice, we should be prepared to expect many contrasts; and for my part, if any one had told me that Ponchard had been appointed professor of mathematics in the College of France, and M. Ampère, director of the Conservatory, I should have believed it without any other confirmation.

It is unfortunate that at the epoch of the installation of the new faculty, the grand master of the university did not judge it necessary to give the reasons for his repugnances and predilections. He ought to have convoked an assembly, at which the entering and the retiring professors, their colleagues, and the pupils, should have been present; and there, in a discourse or a homily, he should have explained to his audience how and why these changes were necessary. He would not have failed, probably, to let us into

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* These professors were appointed in 1823, by an act of the government.

the secret of the rare merit of his *protégés*; and we should not then, as now, have been left to conjecture. This oration is wanting; but it appears to me that, with a little imagination, we may supply its place. There can be no objection, therefore, by putting the following words (by way of supposition) into the mouth of M. d'Hermopolis. This, therefore, is pretty nearly what he should have said:—

"I might very well have dispensed, gentlemen, with the explanations I am about to give. You are aware that my colleagues and I are not obliged to give an account to any one of what we are pleased to order; and our responsibility is only a word calculated to dazzle a few fools. But from my own free will I propose to enter into a few details on the subject of the innovations which I have made in the constitution of the Faculty of Paris.

"In the first place, I discharged Messrs. Chaussier, Pinel, Desgenettes, Dubois, Pelletan, &c.; and you will easily understand the reason. M. Chaussier, it is said, has some knowledge of anatomy and physiology; but it is well you should remember, that, in 1794, he was one of the founders of this very school. It was partly on the plans furnished by him that it was organized. This is an ominous circumstance. It is evident that a man who played so great a part in the revolution, cannot be the professor of a young monarchy. M. Pinel, who is called the restorer of French medicine, and whose name I see everywhere, is perhaps of no greater account than M. Chaussier. He is a man of liberal views and philanthropic ideas. As for the rest, some of his pupils, of whom I have a high opinion, tell me that he dotes, and that his religious views are perhaps not unexceptionable. He has also figured on the revolutionary scene; and for all these reasons we may pass him by. M. Desgenettes, with all his enterprise and his achievements, which the gazettes have made known, suits us no better. He followed the usurper in almost all his campaigns. He received from him decorations and places. He has cured republican soldiers, and professes the greatest admiration for our armies. There is something of a jacobin about him. I depose him with still greater satisfaction than all the others. M. Dubois is tolerably well known in Paris; he has suspicious connexions; and among his patients are to be found several enemies of religion and the king. You know, as well as I, that he has assisted the expulsion of an imperial fœtus. He has, besides, a pride of character and a want of servility, which displeases me in the very highest degree. The good of society requires that he should be removed. M. Pelletan has too much eloquence: a professor ought not to have so much influence over the minds of young men: he may make a bad use of it. There are likewise passages in history which sound very ill. He held places under the republic; and the ex-emperor invested him among the first, with his cross of honour. Messrs. Vauquelin, Moreau de la Sarthe, Leroux, and de Jussieu, will not appear to you more innocent. Their opinions are not pure; and the best way is to get rid of them at once, since the opportunity presents itself.

"You see I have no want of reasons, and *good* reasons, for this purifying measure, which evil-disposed persons have already calumniated. You will see, presently, that the same principles have directed me in the choice of the new professors, and which we have motives more than sufficient to justify.

"First, I present to you M. Deneux, a chevalier of several orders, author of a thesis and two or three pamphlets. We have created for him a chair of Clinical Midwifery; and we engage the pupils to attend his course whenever he may give it*. Next, you have M. Clarion, whose name you hear for the first time; he is an inoffensive man, for whom I have a particular esteem; he will teach you Medical Natural History. They tell me he is very learned; and I doubt not you will have in him a professor of the rarest merit†. I recommend to you especially M. Fizean, whose piety is particularly well known to me. His reputation as a physician is not very extensive. He has written nothing; or a least very little, and very poorly; but he will write more by-and-by. He has scarcely been accustomed to speak in public, and has not much freedom of language; but he will acquire it. He is a very respectable man, whom we must not discourage. He will some day have medical opinions, which will form a

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* This proviso was necessary; for no clinical course is given.

† M. Clarion is thoroughly acquainted with the matters of which he treats. It is justice which everyone renders to him; but he has but very indifferent qualifications for the professorship.

new era. In the meantime, and in order to mature them, we will direct him to deliver a course on Medical Pathology, remembering the precept of Barthez, who said that the best way to instruct one's-self, is to give a course on a subject we do not understand. Wait, then, and you will see fine things.

"M. Guilbert is likewise a great acquisition. He is pretty nearly in the same situation as M. Fizean with respect to knowledge. He is not very well acquainted with the matters of which he has to treat, but he has plenty of good will. He will teach you, in a book which he is now writing, how, in the treatment of certain diseases of females, 'the modesty of a medical man should differ from the modesty of a young virgin;' and how a skilful physician should surmount the resistance of this 'inconvenient and untimely modesty,' and gracefully introduce the leeches into the most secret recesses of the organism*. In teaching, M. Guilbert will be neither less useful nor less brilliant. It may very well happen to him to take one substance for another, to show a specimen of scammony, for instance, when he has been giving a description of rhubarb; but we must pass over these slight spots in consideration of his modesty. Being very anxious to place him beyond the reach of the troubles which sarcastic pupils and his own natural timidity may give rise to, we forewarn the turbulent leaders of the school, that our *gendarmes* are prepared to repress all tokens of disapprobation.

"So much for Pharmacology. We propose to you for Clinical Surgery at the *Hospice de Perfectionnement*, M. Bougon, a man of great resources, who will do wonders. He has equal ability for operating and for teaching. Instead of speaking to you of the patients treated in the hospital, he will read to you, out of a great manuscript book, a valuable monograph on *cancer*, full of luminous ideas. This is an innovation in clinical teaching of which his predecessor, Dubois, never had any idea. When on the subject of the operation for lithotomy, he will recount to you his travels in England, and his conversations with Astley Cooper, who must needs have formed a high opinion of the school of Paris, from so brilliant a specimen. You will perhaps be surprised at his manner of operating. His hand will tremble so as nearly to let fall the bistoury; but reflecting that he is paid for operating on the living, he will always complete his work. If he is in search of a calculus in the bladder, be assured he will get it, at whatever price. He may make two openings, instead of one; cut through what common practitioners respect, and open unaccustomed passages—no matter how, he will get at the stone. Give him plenty of time and well-sharpened instruments, have a great stock of patience, and you will see him accomplish all possible operations. He will not always follow the rules; he will brave the simplest notions of anatomy, surgery, and medicine; but you may believe he knows what he is about, and that it is not his fault if nature has given him two left hands and a contracted mind. Besides, he will be always ready to explain and demonstrate to you. As he has a great stock of assurance, and a rare facility of multiplying insignificant phrases without end, he will never be at a loss. I might say more; but what has been already advanced will, I hope, suffice to convince you that we could not do a better service at once to science, humanity, and your instruction. We may add, finally, that M. Bougon walked to Gaud, for the sake of his health, at the time when that journey was the fashion among persons of quality, and that at his return he rested several hours in a bed upon which a prince expired!

"These are the professors which I commend especially to your attention. Make a point of attending their lectures, if it does not fatigue you too much. There are still some others respecting whom I have no information so positive and conclusive; but I leave to your sagacity to become acquainted with them, and to form an opinion of them. At any rate, gentlemen, if all these new professors are not capable of instructing you, I present to you here four and twenty fellows whom I have chosen, and who will instruct you in their place. I have elected them beforehand to be their successors; and they will form a protection against all those who, having nothing to recommend them but knowledge, might dare to aspire to enter into the sanctuary of the professorship. As it is desirable good principles should be perpetuated, I have conscientiously made my choice; and it is especially piety, docility, and suppleness, that I wish to recompense. As to

* The book announced here appeared in 1826. The expressions cited by the orator will be found in it; together with many others of the same kind. It is a very remarkable production in this respect.

their *knowledge*, I have not examined it so closely. You will see, in the examinations which they will make you undergo, that they have nothing superfluous in that respect; and if it should sometimes happen to you to convict them of ignorance, you may rest assured it is not my fault; for I have strongly recommended them, and they have faithfully promised to read ancient and modern authors; to study the book of nature; to become *learned*, in short; which will not fail to happen, by the efficacy of the ordinance which has made them fellows.

"It only remains for me now, gentlemen, to thank you for having listened to me with so much patience. I have no doubt of the grateful emotions which the solicitude of the government will awaken in your bosoms. Go in peace, and imitate your illustrious masters."

If it be not too presumptuous on our part, we believe we have translated with tolerable fidelity, and rendered into terms sufficiently clear, what M. d'Hermopolis would have said. We now know what to expect; and we should certainly be wrong to give ourselves any uneasiness. Let us rather rejoice in seeing the first school in our country so well regenerated. If we have not *learned professors*, we have *pious men*, which is much more important, in a moral and religious age like our own. If they have not those particular talents which their office seems to demand, we have the consolation of knowing that they are not infected with the least particle of scepticism; and have been educated in the fear of God, and a salutary respect for the powers that be. This is a lesson to the present generation. We may say to the young men—Would you arrive at similar honours? Burn your books. Visit the hospitals and the lecture-rooms seldom; but the antichambers and the vestries frequently. Would you enter the Faculty, the Institute, the Royal Colleges? Go by the way of Mont-Rouge; it is the shortest and surest path. With sufficient talent to be a good churchwarden, and so much medical knowledge as a barber of Henry the Fourth's time, you may enjoy, at the age of thirty years, from ten to twelve thousand livres of revenue. It only requires a little ambition of that kind with which all fools are provided; a proper thirst for gold; plenty of suppleness in the back; and that high-toned philosophy which enables us to support the contempt and disdain the esteem of good men. All these qualifications are to be acquired by practice, aided by natural disposition.

We do not wish this counsel to be followed. We wish still more there was nothing to justify it. It has had reason on its side up to the present time; and it is of M. de Vatismenil we must inquire if it has so no longer. We have had great pleasure in seeing some instances of injustice repaired, in the cases of Messrs. Villemain, Guizot, Ampère, and Cousin. Medical instruction calls loudly for its organs, as well as philosophy and history. The pupils, the faculty, the public, are anxiously waiting. We have our hopes and our fears; but there is nothing certain we can count upon. The best plan for us to pursue, is to make use of the right we have to complain and demand.

Among those whom M. d'Hermopolis did not think it necessary to mention, I observe Messrs. Cayol, Laennec, Landre-Beauvais, Bertin, Récamier, and Palletan. Laennec and Bertin are dead; and I honourably except the other four from the remarks made on the rest. For Messrs. Landré-Beauvais and Récamier, see their articles. As for M. Cayol, without being possessed of talent of the first order, he is a good practitioner. His religious orthodoxy, and his pious connexions, do not prevent his making a very good clinic at *La Charité*; and it is there we want him. M. Pelletan is the worthy inheritor of an illustrious name, and is a professor of very remarkable talent.

I shall add nothing more to these observations on the new faculty; and I wish, with all my heart, any one could convince me of error, or even of exaggeration. It would be a proof that the school is not so bad as is generally, and I believe justly, considered.

MEDICAL EDUCATION IN LONDON.

THE LONDON UNIVERSITY.—Though it was quite sufficient that the Hospitl which was attached to the University, should, in the estimation of the corrupt Council of Lincoln's-Inn-Fields, be *recognised*, merely because it contained upwards of one-hundred beds, there were other requisites, and these of a much higher and more important character, which were looked for by those who were anxious to improve our system of medical education. The fee for attendance on the Hospital was diminished more than one half—a blow—certainly to the system of extortion imposed on the student in the other schools. The fee also included both the patients of the physicians, and the

surgeons, thus holding out the propriety of students acquiring a general knowledge of their profession. These two measures were praiseworthy, but they were tarnished by the system which was adopted in electing and remunerating the medical officers of the new establishment.

As it could not be well supposed that any practitioner of experience or reputation, either physician or surgeon, could undertake the arduous duties of an hospital without receiving some adequate reward, the circumstance of the students' fees being appropriated for the support of the Institution, contrary to the usage of all the other Hospitals in the metropolis, in place of being given as a honorarium to the medical officers, must have have rendered the different appointments objects of no great competition—and indeed not likely to be filled up by any individuals except those connected with the medical school of the University.

The "medical faculty" were therefore compelled to elect some inexperienced men whose habits in early life, however much they may have qualified them to make pictures of *Heterologous deposits* and copiously to extract from the works of German Pathologists, did not particularly well befit them for clinical instruction,—however trifling may have been the difficulties, and however easily they may have been overcome in selecting officers sufficiently competent to take charge of the *medical* patients of the new hospital, they considered the case of the *surgical* department of much more vital importance to their interests.

The acknowledged system of converting operations into a *theatrical exhibition* in our metropolitan hospitals cannot be denied! It is indeed a system fraught with evil—revolting to humanity, and contemptible in those by whom it is practised.

The dramatic performances which in former days brought such crowds of beholders to the borough "united" hospital exhibition, and by which the actors extorted such immense sums of money from the spectators, seemed to have made a deep impression and been forcibly recollected by the "medical faculty," of the Joint Stock Company, in Gower Street,—and they actually had the audacity to declare, that nothing was more essential for insuring the success of their new charitable institution, than engaging some eminent tradegian to exhibit in their theatre.

One of our contemporaries who has even been most forward in advocating the cause of the sick poor, and exposing the vicious practices of our hospital governments, observed on this occasion:

"Is it true, as reported, that the council, or the senate, are *in search of an operator for this hospital*,—a mere mechanical cutter,—a person who delights in blood? It cannot be! for such has been the progress of medical science within the last few years, that the power of operating is now deemed the most insignificant part of a scientific surgeon's capabilities. Once obtain for this hospital the reputation for its being *a cutting and slaughtering establishment*, and the directors of it will search in vain for cases of disease wherewith to instruct the students!"*

With all these advantages as well as some others relating to the accommodation of the student, and with its facilities for clinical instruction, the North London Hospital must be considered as a useful appendage in the medical education of the London University, and if we were to measure it in the estimation of students, the number which have entered since it was first established, which is now only two years, far exceeds the proportion in larger establishments, and being attended by many who are not pupils of the University, but pupils of other schools in its immediate vicinity, it must be considered as having met with every success. It has indeed been lately rumoured, that this very circumstance of the pupils of other schools attending the North London Hospital, which might have been thought by some a flattering tribute of success, has been brought forward as an argument by some enlightened and *liberal* member of the "medical faculty" of the University, to show the propriety of passing a by-law, not to admit any students except those of the University to be entitled to become pupils of the North London Hospital.

From the period of the election of Dr. Jones Quain, to the chair of anatomy, the University of London continued progressively to acquire a higher and higher rank amongst the medical schools of the metropolis. The intriguing spirit which till that period prevailed amongst its rulers had effectually checked its advancement, the institution having been condemned and even divided by those very individuals who on its first establishment had given it their strenuous countenance and support; but from the moment of Dr. Quain's resignation, there seems to have at once burst forth the old lover of monopoly, self-interest and corruption

* Vide Lancet, p. 73. Vol. I., 1834.

which had but a few years before destroyed almost the whole frame-work of the University.

Having been established and supported by that political party who have been always advocating liberal principles and holding forth that the professors of this University should be selected from the superiority of their intellectual endowments, and as Lord Brougham declared, nothing but merit alone should entitle a man to any of the chairs, the public are entitled to scrutenize and rigorously to examine how far on the late occasion in the electing a successor to Dr. Quain, the conduct of the rulers of the University has been consistent with those principles. Let us deliberately review the circumstances connected with this election. It matters not what was the *real* cause of Dr. Quain's resignation. It is quite certain it was neither from *incompetency* nor from bad health, but entirely arose from considerations of a private nature, and from feelings of disapprobation of the conduct of others with whom he was necessarily associated at the University. But so determined was he to disentangle himself from all further connection with that institution, that he did not even give out the slightest hint of his intentions until he returned home to his native land, when he immediately sent in his resignation, and being at such a distance, he was thus prevented from coming in contact or receiving any overtures which many individuals, deeply interested in the University, might have been prompted to make.

Now what was to be done? How was a competent professor of anatomy to be obtained? the importance of the chair for the interest of the medical school being universally acknowledged. Those who have always advocated the system of *concours* called for it aloud on this occasion. It had been already adopted in the mock-election of the house-surgeons to the hospital, and had been trumpeted forth as the harbinger of the new system of things. Or was the glorious *certificate* system to be put in force, with all its frauds and impotence? Neither of these, however, were adopted; but a mode of election, artfully concocted and ingeniously contrived, far more deformed, and of a more deplorable character than the *certificate* system with all its enormities.

"The "medical faculty" of the university, lending a deaf ear to the proposals of the most eminent anatomists in this metropolis, well knowing that those amongst them who were best qualified to fill the anatomical chair, would not humiliate themselves to submit to the terms which certain individuals in the medical faculty considered essential for their own interest; this very medical faculty dis patched not openly, but with a wily secresy, that individual whose own interests were most entwined with those of their new professor, down to modern Athens to discover some "great unknown," who would accept the chair on such terms as would be most acceptable to the medical junta.

It need not be wondered at that an "unknown man of the north" was at once discovered by the Gower-street diplomatist, in every way calculated for *their* purposes; and such was the rapidity with which this mission was executed, that the whole arrangements were made, signed, sealed, and delivered, ere it was even whispered but to a few chosen friends.

The *news* indeed was a death-blow to the hopes and expectations of our London anatomists; and we cannot better express the general feeling which was created amongst our medical brethren than in the powerful and emphatic words of a contemporary journalist. "The proceedings," he observes, "connected with, and the result of, the recent election in 'University College' have created throughout the profession a feeling of disgust, which appears to increase in intensity in proportion as the subject is discussed or examined. It has acted like a blast upon the hopes of those advocates of national improvement, who deprecate the intrusion of selfish and sinister influences, where genius should be allowed to sit and exercise her functions undisturbed upon her simple but noble throne. A continuance in the line of policy which has been recently pursued by the medical faculty, the committee of the senate and the council of the College would necessarily prove ruinous to the institution,—ruinous, not only with regard to the reputation of the College and all the highest attributes of learning, but ruinous also with reference to another, a nearer, and, we fear, a dearer object in the mind of many of the parties of the three bodies which we have described, namely, that of *pecuniary gain.* * * * Not only is monopoly rendered rampant once more, but the very principle of the monopolists serves as an announcement that the community, the profession, and the students of the Institution have been BETRAYED." * * * "A scene such as this cannot be

presented to the view of the profession and the public, without bringing down upon the professors and the council an overwhelming torrent of disgust and indignation. An intelligent public will not submit to an insult thus wantonly offered to the talents and acquirements of the nation*." ANGLICUS.

CLINICAL LECTURE,

Delivered at the Westminster Hospital, Nov. 19, 1836.

By MR. GUTHRIE.

SOME weeks ago I mentioned to you that the remedy used by the late Mr. St. John Long was under trial at the Royal Westminster Ophthalmic Hospital, in order that you might attend and see what was doing. Some misrepresentation took place in a report made to the *Lancet*, and as I am desirous that none should occur on this occasion, I read what I intend to say on the subject, and have had copies taken for such of the Journals as may please to make use of them; and I have done this from a belief that the profession will be glad to know the result of the experiment on trial. The parties who supplied the liniment also furnished with it Mr. Wood, the person who rubbed under Mr. Long, in order that the trial might be fairly made. It was conducted in the house surgeon's room, open, however, to all the students and professional persons who chose to attend. Several people were selected, but many only returned once or twice, thinking that there was some experiment to be tried upon them, and not having heard of the celebrity of Mr. Long among persons of better condition. Of eight cases which the house surgeon, Mr. Dusent, wished to keep, three attended a few times only, and then absented themselves, apparently for the same reason. We have records, therefore, of five only who gave it a fair trial, and two of these were in-patients, one a boy, who came up amaurotic from the country, the other, a poor woman I admitted to oblige a lady who was much interested in the success of the remedy. There is an old friend of mine who tells a story of two French generals in the time of the Revolution (I must say I believe they are imaginary); one used always to address the troops, and conclude by saying, "Allez, mes enfans;" they went but never did anything. The other always said "Allons, mes enfans," placed himself at their head, and always led the way to victory. As I happened at the time to have a pain in my right knee, which made me limp a little, and which I have had twice before three or four years ago, for which I was obliged to apply a blister, I thought I would imitate the latter general, and try the experiment on myself also, making then the sixth case, and as I shall speak, I fear, of the remedy in a manner which will not be quite satisfactory to the parties interested in it, and who have different views of it to mine, I shall at once say it cured my knee, and the boy's eye, who was an in-patient, and did good to all the remaining four.

The liniment was kept in a small pewter bottle, and was well shook before it was poured out, when it looked like thick yellow cream, and had a faint turpentine smell. As it was brought to the hospital avowedly as a secret, and I had agreed that it should be so during the trial, I refrained from touching it, or making any experiments upon it—I thought it a point of honour to do so. The house surgeon, Mr. Dasent, who had access to some of it, says, he tried it with the ordinary test paper, and found it was acid. When applied to the skin with a soft sponge, it felt cool and agreeable, and not in the slightest degree stimulating; gentle friction with the sponge caused a slight sensation of warmth, followed by a little redness; and used in this way, I should say it was as harmless a preparation as was ever made by regular or irregular doctor. However clean the skin appeared to be, it always made it look cleaner, and Mr. Wood, on my pointing this out to him, said, he often found he could rub swarthy looking ladies whiter. The sponge was a small, soft, round one, fastened to the little finger by a loop, which much facilitates the use of it; and I would recommend every body to apply a liniment in this way, whatever may be its composition.

I was now told very gravely that the liniment could only produce its one effect, viz.—a discharge from the surface when there was mischief below, that is, inflammation, or ulceration, or other evil, and that it would produce its effect only over the place. This I begged leave to doubt, and to assure the gentlemen I thought they were mistaken, but that they had now an opportunity of proving it, for I had inflammation in the synovial membrane of my knee, and that I had pain on one point, which made me limp, and which their remedy must now, by their rule, find. If Mr. Wood, the rubber,

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* Vide *Lancet*, p. 789, Sept. 3, 1836.

had had any professional knowledge, he would have been triumphant, for he would have known that the pain, in such cases, was always on the under part of the inside, and would have rubbed and produced a sore there accordingly; but as he did not know, he rubbed generally, in perfect good faith, I believe, and confident, in his opinion, that the particular spot would become redder. At last a little redness did appear, and I observed, or thought I observed, that the rubbing was different; instead of being general it became concentrated, and the sponge turned on the spot as on a pivot; the part consequently became tender, and the blood seemed ready to start, with which I was quite satisfied. The next morning there was a red spot, about the size of half-a-crown, studded all over with red points, from all of which blood has flowed on very slight friction. The next place tried was the outside of the knee, with the same effect, and I saw the same thing could be done anywhere by the same mode of rubbing. To prove this, I requested one of the gentlemen at the Westminster Hospital to rub another place with soap-suds and sponge, in the same way he had seen it done at the Ophthalmic Hospital, and exactly the same result followed; it was even sorer, and I should have said, if I had been asked, that the soap-lather was the most severe liniment of the two. Mr. Wood rubbed my knee, indeed both, six or eight times more when the affected one became sound. With respect to the patients, they were rubbed on the forehead, on the temples, in front of the hair, and on the nape of the neck, and they were, what is technically called, "*rubbed out*," that is, the part was made sore, when a pounded cabbage-leaf was applied, and fastened by a slip of sticking-plaster. I was surprised a day or two afterwards to see the sponge applied to the surface, and rubbed round until it bled freely; the patient complained loudly of the pain, but was told to be quiet for a moment, until the blood flowed, when the pain would cease, which was the case; in the same way, I suppose, that a horse brings his raw shoulder to the collar, and suffers after a time but little uneasiness. A cabbage-leaf was again applied, and a watery discharge followed to a considerable extent. The repetition of the rubbing at last removed the skin; and in the boy, who was a patient in the house, a granulating surface was induced, which suppurated freely.

The lady to whom I have alluded, and who is of unsullied honour and truth, has often assured me, that the remedy was perfectly harmless, that she rubbed her children's faces and eyes with it, and, indeed, every part in which they had uneasiness, and that she did so from knowing what it was. Although she could have no motive for recommending it but the purest philanthrophy, I confess I did not quite believe; but I am now satisfied she was quite correct in saying it was harmless, and that Mr. Long spoke the truth when he mystified the judge and jury, lawyers and doctors, by saying, on his trial for the death of Mr. Lloyd and Miss Cashin, that he would have applied the liniment to the inflamed and mortified surfaces, if these bodies had been allowed to remain under his care. He spoke, however, only *half* the truth, he might have applied the liniment, but he did not say he would have done it in the same manner; he would not, in fact, have *rubbed them out*. Everybody thought it was all in the liniment; no one thought there was anything in the manner of using it; and I know two very able physicians in this town, who have each invented a very stimulating liniment, resembling it, as they suppose, in appearance and effect, thus attributing everything to the liniment, and nothing to the manner of using; whilst, in fact, everything, I believe, depends on the manner of using it, and nothing on the liniment. You can easily understand that if the whole of a lady's neck and breast be rubbed generally, so as to make it red, and that a particular part be *rubbed out*, erysipelatous inflammation may supervene in many constitutions, I only wonder it has not happened more often, and I am quite sure the same thing would occur from soap-suds, as readily as from Mr. Long's liniment.

As far as I can judge of myself, I have given you this statement with the greatest impartiality and truth. I would willingly speak in praise of the liniment if I could, but further than that, I would use it in preference to any other simple one. I can, however, speak in praise of Mr. Wood, the rubber, for he is certainly the very best in England, and every man will benefit by a lesson from him in the art of producing counter-irritation.

If the parties more immediately concerned think I have erred on any point, I can only say I am quite ready to give another trial, before any more competent

judge they may name, and the hospital is open to any one to look on.

I have now to tell you, I have two other trials going on, with secret remedies; but with a different class of persons, as they are both profesional men—and to invite you to watch over their progress. The first is with Dr. Turnbull, at the Ophthalmic Hospital. Having been requested to see a patient with him, he explained to me, that having been forestalled in the credit he ought to have derived from the introduction into this country of veratrine, aconitine, and of making them known before he had had a sufficient opportunity of ascertaining their values, he had determined not to disclose the nature of the remedy he was now using for the cure of amaurosis, amblyopea, &c., until he had fully ascertained what it was capable of doing. I replied, that no one would object to a fair and reasonable trial, but beyond that the profession would not submit to it, if he wished to maintain any thing like character in it; but that he was the best judge on this point; and I should be happy to give him a fair trial at the Ophthalmic Hospital. He readily accepted the offer, and attended last Monday, for the first time. I have given him four bad cases and one fair one, and I beg you will all attend whenever you please to see them. The remedy looks like a tincture, and is applied with a small sponge, on the flat part of a stick, like a sponge tooth-brush. It is merely spread daily over the forehead, temples, and cheeks, lightly, and dried off with a piece of blotting-paper. It gives rise to scarcely any sensation, certainly not more than a little warmth. The results we shall see.

The other trial is for the cure of cancer. Mr. Hutchinson, an apothecary, from Cork, has obtained from an Irish nobleman a secret remedy, which, he says, cures this disease when apparently local. I have only one case in the hospital, and that of swelled inguinal glands, after cancer scroti, and which I believe to be of a similar character. The remedy is a sort of brown coloured ointment, which he has applied. I shall introduce him to the surgeons of St. George's, that they may let him try it. I do not think his remedy can do any harm, if it does no good; and these trials always do good, as they bring these things to their just elevation or level.

WESTMINSTER MEDICAL SOCIETY.

Saturday Nov. 19, 1836.

Dr. C. B. Williams, President.

Homœopathy.

Dr. Uwins read a paper on Homœopathy, in which he exposed the imperfect state of allopathy, and what he designated the magnificent discovery of Homœopathy. He mentioned some striking cases of the efficiency of the new mode of medication by which chronic enlargement of the axillary glands had disappeared in twenty-four hours by an infinitesimal dose of aconite; a case in which a drop of tincture of opium caused purgation, and other equally remarkable examples of the miraculous effects of Hahnemanic doses. During the reading of the paper, Dr. Uwins received an urgent note, which obliged him to retire as soon as he had concluded his essay.

A gentleman called on the Dr. to state before he retired from the society, whether he was a homœopathist or not. Dr. Uwins replied, that his paper would speak for itself. Dr. Addison regretted the absence of Dr. Uwins, as it placed the society in a dilemma, for it was a delicate matter to discuss, the merits of a paper whose author was not present to defend it. He thought it rather remarkable that on that evening and on that night fortnight, Dr. Uwins was unfortunately called away after he had delivered his sentiments; and he wished to know was there any gentleman present who would stand forth as the defender of homœopathy?

The president put the question, but no one appeared as the advocate of Hahnemanism. Dr. Bureaud rose to offer a few additional observations against homœopathy, but as Dr. Uwins had retired he felt some hesitation in commenting upon his paper. Dr. B. then gave a graphic account of the absurdities of homœopathists, and stated that some of them had found as wonderful effects from saccharum lactis (flour and sugar,) as from any thing else. Mr. Costello repudiated the new doctrine, and related with great gravity a case of hydrophobia in an ox, which a homœopathist failed to cure with aconite, and ascribed his want of success to the neglect of his advice in not giving an infinitessimal doze of belladonna at a certain hour. He complained that Dr. Uwins had passed by the disgusting remedies of syphiline, cancerine, &c., and that his paper on the whole was a bad defence of the new sys-

tem. Dr. Ashwell commented upon the sudden retirement of the author of the paper, and called on any gentleman present to state to the society the effect of homœopathic doses in acute and dangerous diseases.

Mr. H. J. Johnson rose to defend Dr. Uwins in his absence, and the great discovery of Hahneman. He irronically analysed the paper with great ability, and was loudly applauded during his speech.

Dr. A. T. Thomson thought the society would be degraded by continuing the discussion, and that it ought to be for ever abandoned. Mr. Ure gave a most unfavourable account of homœopathy in the German Hospitals, to which he was an eye witness.

Dr. Addison concluded the debate by censuring in no slight measure the folly, absurdity, and knavery of homœopathists, and the gross insult offered by some of the highest personages in the kingdom to the medical profession in this country, by importing German impostors as their great medical attendants. (Applause).

The meeting then adjourned.

NATIVE EASTERN MEDICINE.

To the Editor.

Sir,—During a residence of some time in the East, I have had frequent opportunities of observing the extensive knowledge which the Asiatics possess in the mode of action of various narcotic herbs and plants, and the particular effects which these substances have, in proportion to their dose, on the brain and cerebellum. It often happens, indeed, in the winding and tortuous ways of Turkish intrigue, when bribery and all other means have failed, that recourse is had to these agents, with a view of sinking down the reserve, and deadening the reasons of those who have secrets to disclose, and which would otherwise remain unrevealed. As such a deriliction of duty is often followed by the punishment of death by poison, or the bowstring, it is curious to observe the struggle between the sense of retaining the secret and the effects of the narcotics which have been taken, and the consummate skill and cunning of these people in drawing the person thus treated to the point without exciting suspicion, and the apparent unconcern with which they lead him to disclose the secret they are so anxious to gain; and it is seldom, unless he be possessed of more than ordinary strength of mind and body, that they are foiled in their scheme. I was once a witness to a case of this kind which amused me considerably.

A messenger from Ibrahim Pacha, a subaltern officer of the rank of capondan, equal to our lieutenant, was despatched with a private message to Lady ——, residing on the Lebanon, on a subject of trivial importance, which attracted the curiosity of her ladyship's dependants, and they determined, *côute qui côute,* to find out the sum and substance of it. As they proceeded with great skill to determine certain conditions of mind, which were to lead to a certain result, by a measured use of words and by the internal exhibition of narcotics, I could not help admiring the admirable and philosophic manner in which they proceeded.

Having enlisted the deik or cook, and the caffinger or coffee-maker on their side, they greeted the lieutenant on his first arrival with the title of beinboshi and caimakaim (lieut.-colonel and colonel), titles far above his rank, and made him professions of the most abject nature; they were his slaves, his dogs, and his servants, who sought the honour of his commands; they made representations to him of the great honour he had done them in giving them the honour of his presence, crossed their hands humbly over their breasts, as if he had been a pacha, and in all manner of ways, only known to Turks, endeavoured to gain his attention and secure his confidence. The effect of all this was visible in the pleased look of the lieutenant at so flattering a reception, and the important air which he put on; he already dreamed golden dreams of bukshish (presents), and the thanks he should receive at the hands of his master for the manner in which he had acquitted himself of his commission; he gave the salaam aleikom with unusual force and vigour. His vanity was touched. This was the first important step. The next was to deaden his natural acuteness. This was effected by charging his coffee redolent of orange flower-water, for a decoction of the seeds of the stramonium, which puts a stop to thought, leaving the mind nearly a chaos, volition and sensation merely remaining, at the same time that it produces a kind of stupor, of a highly pleasant nature. This was visible in the half sleepy way in which he smoked his chibouque. A large tray, containing some of the most dainty dishes of the Turkish kitchen, prepared with unusual care, was next placed before him, and as Turkish officers of his rank are rarely greeted with

delicacies, he gorged himself nearly to suffocation. This had its effect in rendering him still more stupid. A choice bottle of vino d'oro, made on the Lebanon, next attracted his attention—it was soon finished. The effects of all this was now evident in his dull eye, and contracted pupil; he stupidly boasted of his prowess in the field, and of the effects of his charms on the Turkish ladies, stroked his thin beard, for he was a youngster, and put on all the airs of a high pacha. All those now implicated in the scheme, commenced a strong fire of flattery; praised his beard, his eyes, his sash, his moustache, and his martial look, complimented him on his being a favourite with the lion of war, Ibrahim, and plied him with wine till he was fairly fuddled. Last of all, his chibouque was charged with assis or hashish, and long before he had seen the lady to whom he was dispatched, the nature of the commission with which he had been charged was known to every one. The hashish is procured from a species of hemp (cannabis sativa?) which grows wild in sandy spots in Egypt and Syria. In Egypt it is very common, and grows chiefly on the banks of the Nile: it is much smaller than our hemp, and its leaves of a darker colour; when first gathered it has a faintish aromatic odour, which it loses on drying: it grows to about the height of from one to two feet, seldom higher. The Arabs and Copts use it in place of opium, to which it is by some preferred, on account of its not leaving behind so much depression. The Marabout, or fire-eaters of the East, use it in large quantities, to produce excitement and to deaden the sensibility of the nerves. When labouring under the effects of the hashish, they are capable of the most ridiculous extravagances, cutting and slashing themselves with knives, putting soot in their mouths, sticking pins and needles into their flesh; and what with the great excitement this substance produces, and the violent contortions of body it gives rise to, it generally ends by their falling down in a state of insensibility. An extract is made from the seeds at Cairo, which is sold in small white cakes, at about two piastres the cake; the leaves are also mixed with tobacco for smoking. The effects of the hashish when fresh are highly curious; it disposes to talking, singing, and violent motion; in this respect resembling more the laughing gas than any thing else to which I can compare it, producing, like it, a great dilatation of the pupil, and differing from opium, which seems to act more like stramonium in putting a stop to thought, and in producing pleasurable sensations.

It is curious, that in endeavouring to gain a secret by means of the hashish, the sensibility of the mind is first deadened by stramonium or opium, without which, they assert, they are often foiled by the person subjected to this test, retaining his faculties and natural penetration, during the strong excitement which this substance produces. Can it be that the stramonium acts by destroying the memory? Certain it is, as I can testify from experience, that during the action of a decoction of stramonium seeds, I found the greatest difficulty in recalling the transactions of the previous day. The Turks assert, that if they can produce this latter effect of *forgetfulness*, they have no difficulty in making a person tell them *all he knows*, by giving him certain doses of the hashish; it must not, however, be too large, else it produces too much excitement, leading to violent motion, which latter effect is what they seek to avoid, talking and singing being the most favourable conditions for drawing from him his secret.

It very often happens that an intriguer will cause the hashish to be administered to his rival on some public occasion, with a view of exciting him to the degree of breaking through the strict ceremonials of Turkish etiquette, and of rendering him ridiculous in the eyes of his superiors; and I have heard it said that it has often cost such an unfortunate fellow his life.

It is certain, that the Asiatics can by means of this substance produce any condition of mind, from a state of silliness to downright delirium, and that their knowledge of the determinate actions of certain remedies on the animal economy, is far greater than might *à priori* have been anticipated.

The white cake, when digested in diluted acetic acid, and treated with ammonia, yielded a small quantity of flocculent powder, soluble in ether, alcohol, and water. It is the active ingredient of the cannabis in a high state of concentration. Four grains of it produced nearly similar effects on an Arab as half a drachm of the white cake. It yielded also a considerable quantity of light coloured oil. During the plague of last year it was administered to people attacked by this disease, on whom it appeared to exert very little influence.

Winchelsea. H. F. Clarke.

On the Mode of selecting and remunerating Medical Men for professional Attendance on the Poor of a Parish or District; read before the Hunterian Society. By Thomas Hodgkin, M.D. Submitted to the serious Consideration of all who take an Interest in the well-being of their poorer Neighbours. 1836.

Dr. Hodgkin's succeeding remarks deserve attentive consideration. The next subject is one of some interest, namely, the advantages of self-supporting dispensaries, which is thus elucidated by Dr. Hodgkin.

"I shall now proceed to the consideration of self-supporting dispensaries. They may justly be regarded as the best, and, at the same time, as the most economical means of supplying prompt and efficient medical assistance to the working classes. Their important advantages are not, however, confined to the administration of prompt and able succour to physical suffering; they have a strong tendency to maintain and elevate the moral character, since they are calculated to avert those calamities, which, commencing in sickness, end in the absolute degradation of families, once respectable in their poverty. Self-supporting dispensaries contribute powerfully to maintain independence, and encourage a spirit of prudent forethought amongst the poor and operative classes; and in proportion as these effects are produced, must they raise the character and diminish the burdens of the district in which they are in operation. Great praise is therefore due to H. Smith, of Southam, for the benevolence, zeal, and perseverance, which he has displayed in commencing and promoting these valuable institutions.

"The self-supporting dispensary, as its name implies, is maintained by the contributions of those for whose benefit it exists. Individuals or families of this class who wish to participate in its benefits, are expected to attach themselves to it when in health, and to continue to support it by contributions paid in advance. The sum required to be annually paid by each member is very trifling, and the subscriber, in return for it, is enabled, in the event of sickness, to obtain advice and medicine without delay, and without either the dread of incurring a long and burdensome bill, or the annoyance and degradation of begging, perhaps with many unsuccessful efforts, a common dispensary ticket, or admission to an hospital. I shall not at present consider the mode in which the rate of subscription may be fixed. A payment of about four shillings annually for adults, and considerably less for children, has been found sufficient where the plan has, as yet, been tried. That is to say, the expense of medicines and compounding prescriptions, and the fees of the medical officers, have been covered by it. There has been, however, another fund, auxiliary to that raised by the ordinary members, and produced by the subscriptions of those in richer circumstances. This fund has been required in the first instance to provide the necessary apartments, shop, furniture, &c., and is afterwards employed to keep them up, and to supply various articles of comfort in aid of medicine and advice in the most urgent and necessitous cases occurring among the sick members.

"Several medical men are attached to one dispensary, and it is left to the choice of the patients to seek the advice of whomsoever they may prefer. It may happen that all the medical men of the district are attached to the dispensary, in which case the patient's choice of his medical attendant will be as free as that of any individual who becomes a private patient. Although this freedom of choice is left to the members of the dispensary, it is understood that the patients can only consult those medical men who are the accredited professional officers of the institution. It would not do for every one who may style himself a professional man, and who may live within the district, to see patients and send his prescriptions to the dispensary without any check.

"The prescriptions are put up in the dispensing shop of the institution, and by an authorised person in its employ. The plan of allowing the prescriptions to be prepared and sent forth from the premises of medical men who may choose to call their surgeries self-supporting dispensaries, opens the door to great and serious abuses, and is therefore justly reprobated by the intelligent founder of *bonâ fide self-supporting dispensaries.*

"By a distinct registration and subscription, obstetric assistance is placed within the reach of subscribing females.

"Sick persons who have not already subscribed to the dispensary, are allowed to take advantage of its benefits by the payment of half a-year's subscription in advance, provided two other individuals, not requiring assistance, join at the same time, and also pay their subscriptions in advance. Benefit societies are allowed to avail themselves of the dispensary in order to provide medical assistance for their

members by payment of a subscription proportioned to the number of members. The members of such societies are admitted on rather lower terms than individual subscribers, probably in part because the trouble and expense of collecting is diminished, and perhaps in part because of the fact, that membership of one of these societies implies that the individual belongs to a class of which the average health is comparatively good.

"The poor relieved by parishes, or by non-medical charitable institutions, have sometimes been permitted to participate in the advantages of the dispensary, by means of tickets of admission, which parishes, or the institutions alluded to, are allowed to purchase from the dispensary. At the same time, a distinct line of demarcation is drawn between this last class of patients and the regular subscribers to the dispensary. Without this distinction to secure superior advantages to the subscribers, the important benefit to be derived from self-supporting dispensaries as the means of promoting a prudent forethought amongst the working class, would be very much done away with.

"There are other details of arrangement connected with the operation of self-supporting dispensaries, which it is needless for me to take up your time by particularizing. That which has been already advanced, is sufficient to show on principle, that they are calculated to promote prudence and forethought amongst the class, who derive many of their calamities from the want of these virtues; that they serve as a guarantee to the poor against the overwhelming pressure of heavy doctors' bills, incurred by protracted illness, privately attended, as well as against the evils of parish-medical assistance inefficiently administered;—that they afford an equal guarantee to the medical practitioner against a long list of bad debts, and enable him, with less expense to himself, and with better chance of success, to establish his own reputation on proofs of benevolence and skill.

"That these anticipated advantages are not merely imaginary, has been demonstrated by the experience of many self supporting dispensaries established in different parts of the country, and which have existed for a sufficient length of time to exhibit their practicability in a pecuniary as well as in a medical point of view. The plan of self-supporting dispensaries is completely in unison with the principles upon which the new poor laws have been framed, and is cordially approved by the commissioners and other officers entrusted with the charge of carrying them into effect. At the same time it is undesirable that these dispensaries should be established by any direct interference of theirs, since one of their most important objects, namely, that of raising the working class above the rank of paupers, would in degree be defeated by making their establishment a part of the duty of those employed in administering the poor laws. It would also be impolitic as respects the success of the institutions, since many of those for whom they are designed, would be more deterred from joining them by the idea that their object is to reduce the poor rates, than attracted to do so by assurances, that their main object is to supply the working class with the most effectual assistance in sickness, and to increase and maintain their prosperity in health. The establishment of a dispensary should originate with those who, in making these assurances, are removed from all suspicion; who can be heard with confidence when they state the manifold advantages of the plan, and whose personal influence may give a bias in its favour, rather than against it. It should be clearly set forth that the self-supporting dispensary is as necessary and useful to the mechanic and the labourer, as assurance against fire is to the wealthy owner of houses and other valuable buildings; and that the payment of a small sum is made the means of protection against heavy and ruinous loss. When with these views properly placed before them, the most industrious and meritorious of the working class in any district have established a self supporting dispensary, and have experienced its advantages, the time will be arrived at which the guardians of the poor may seek to obtain from the dispensary, medical assistance for any sick poor to whom it may be found expedient to afford some relief without admission to the poor-house. Such addition to the class to be relieved by the dispensary would probably require an addition to the medical staff. Whatever may have been the mode in which the medical men first appointed were selected, those who may be subsequently appointed, whether as additional medical officers, as in the case just supposed, or as substitutes to fill vacancies occasioned by the death or retirement of any medical officer, ought to be selected by the method of *concours* recommended in another part of this essay.

"It might be found expedient for various reasons to let the appointment of the medical officers be for the term of five years, and the reappointment of any medical officer for a second term should be discouraged, though it could not with propriety be wholly interdicted. A period of five years is perhaps as long as any medical man would be found willing zealously and completely to discharge the duties of the office in the mode in which they ought to be performed. For not only should the poor receive the requisite care, but certain statistical enquiries and records should be made, which would be of great value both to the public and to the profession. As private practice is unfavourable to the prosecution of such researches, it is the more desirable that the opportunities of a public description should not be neglected in any district. In five years the medical officer will probably not only become weary of his office, and consequently somewhat lax in the discharge of these accessary duties, but he will have reaped, on his own account, all the benefits which the circumstance of his connexion with the dispensary could afford him; and as not only the medical man but many of those who had been his dispensary patients, may in the interval have improved their pecuniary resourses, his secession would have the effect of removing from the dispensary those members, who ought to reward the medical man on a different and more liberal footing.

"Where the parishes have the means of availing themselves of a self-supporting dispensary, for the purpose of relieving sick poor at their own homes, the duties of the medical man directly appointed by the parish would be confined to the poor house. The demand on his exertions and time would be far less than has hitherto been the case, and consequently whilst but a small fee would be required, professional men of accomplishment and experience would not be unwilling to become candidates for the office."

We leave our readers to judge of the merits of the foregoing observations, as every one engaged in practice can do so. There are some advantages in the proposed institutions, but a vast deal of injury in our opinion to general practitioners. We now come to the mode of appointing parish medical officers which concludes the observations of Dr. Hodgkin, which accord with those of the profession in general.

"I do not conceive it necessary that I should at present more minutely detail the means by which the selection and remuneration of medical men for parish service may be rendered much more satisfactory, both to the profession and to the public, than they can be by the operation of the present system.

"I trust my brethren in the profession will pause before they condemn me as guilty of needlessly seeking to introduce innovation and change in what I have already advanced. The evils to which I have alluded, have been long perceived and lamented by many worthy and honourable members of our profession. In the transactions of the associated apothecaries and surgeon apothecaries of England and Wales there is an excellent article on this subject, drawn up by Dr. Kerrison, but doubtless expressing the sentiments of his associates. In that paper the justice of the complaints against the present system is substantiated by numerous facts. Dr. Waddington of Monmouth has written some excellent observations on the attendance of the poor in sickness, and the editors of the London Medical Repository, who have quoted largely from that essay, have more than once recommended the state of the sick poor to the serious attention of the medical profession in this country. Dr. Yeloly, when under examination before the Committee of the House of Commons, was asked whether there was any information which he wished to communicate to the Committee with reference to medical attendance on the poor in the country. 'It would be exceedingly desirable,' he replied, 'that legislative measures could be adopted, which would enable the poor to have more efficient advice than they can have at present.' The point to which he alluded, was the farming out the medical attendance on the poor to the lowest bidder. Some pertinent remarks on this subject are contained in a valuable pamphlet by J. F. Hulbert, which has come into my hands since the greater part of this essay was written. Nor are medical men unconscious of the baneful influence of this system as respects themselves. The subject was one of lively interest with many gentlemen whom I had the pleasure of meeting at the last Anniversary of the Provincial Medical Association; and although it was not taken up, as a part of the business of the meeting, it obtained considerable deliberation and discussion. Nevertheless it is greatly to be feared that medical men are not sufficiently aware of the extent to which

they have unintentionally contributed to bring the evil upon themselves. Sometimes the anxiety of medical men to obtain public appointments has been so great, that they have disregarded the sacrifice which they were making, and acted like some stage-coach proprietors, who, in the heat of opposition, carry their passengers for nothing, and give them a dinner on the road. The natural consequence has been, that the public has greatly *over*-rated the importance of these appointments to medical men, and equally *under*-rated the value of their time and services.

"The conjoined science and practice of medicine may justly be regarded amongst the most laudable and ennobling pursuits in which man can be engaged. Celsus tells us that medicine in its earliest ages formed a branch of philosophy. Cicero says: '*Homines ad deos nulla re propius accedunt quam salutem hominibus dando.*' The author of the book of Ecclesiasticus enjoins to 'honour a physician with the honour due unto him, for the uses ye may have of him, for the Lord hath created him; for of the Most High cometh healing, and he shall receive honour of the king. The skill of the physician shall lift up his head, and in the sight of great men he shall be in admiration.'

"The names of many, who have adorned our profession, might be mentioned as a proof that medical men have furnished some of the brightest examples both in science and philanthropy; and it may without fear of contradiction be asserted of the body at large at the present day, that there is no other set of men, whose gratuitous services and personal sacrifices in the cause of suffering humanity can stand in comparison with theirs. I do not make this statement out of arrogant attachment to our profession, or in disrespect of other professions, but in the conviction of its truth, I am jealous that our honour should be unstained.

"I am aware that there are some members of our profession, who have experienced the evils of the present system, and who fear that the operations of the Poor Law Commissioners will tend to confirm if not to aggravate the evil. If there be any ground for this suspicion, I believe it is to be found in the fact of some medical men having already lent themselves to that pecuniary competition which I have described and condemned in the commencement of this paper. Its tendencies are seen and felt by ourselves; but they are unperceived by those who are not of the medical profession, who are therefore deceived by its specious appearance of fairness, and by its promise of economy. From personal intercourse with the Poor Law Commission, I am warranted in asserting, that they are anxious to adopt that plan which shall combine the greatest satisfaction to the medical profession, with the largest amount of advantage both to the suffering poor, and to the community in general.

"Let us unite our efforts to devise and execute such a plan, and in so doing, co-operate with their patriotic labours."

Such are the opinions of a gentleman well able to judge of the important subjects discussed in the preceding extracts, and they are calculated to excite reflection, and if adopted, to advance the interests of of our profession.

AUSCULTATION OF THE CIRCULATORY APPARATUS.

Ausculation of the Heart.—Auscultation is equally applicable to the heart as to the lungs; but in order to appreciate the phenomena produced functionally by the whole mechanism of this organ, it is first necessary to have a correct idea of the machine, and its action. We have then to notice the anatomical and physiological considerations which relate to our subject.

I acknowledge that a great number of the following facts are due to the observations of M. Bouillaud, to whose labours science owes so much, and more especially, to knowledge of the centre of the circulation, and its diseases. I shall also add the recent report of the British Association, "on the motion and sounds of the heart," by the committees of London, Dublin and Edinburgh, and observations "on the Gyration of the heart," by Mr. F. A. Greeves.

Anatomy on the Heart.—The heart is a hollow muscle having the form of an inverted cone. Its size cannot be exactly fixed. Laennec observed, that it is generally a little less than, or equal to, or somewhat greater than the size of the first of the same subject.

This organ is situated in the left cavity of the chest; where it occupies the region corresponding to the inferior part of the sternum, and to the cartilages of the lower true ribs of the left side. Its position is such that its base looks upwards, backwards, and to the right, whilst its apex is turned to the left, forwards and

downwards, at the level of the fifth intercostal space. Thus situated in the anterior mediastnum, and retained in its position by the fibro-serous bag of the pericardium, in which it is enclosed, the heart reposes below upon the muscular wall (diaphragm) which separates the chest from the abdomen.

The anterior edge of the right lung advances slightly in front, on the right portion of the pericardium and corresponding half of the heart, whilst the anterior portion of the left lung, advancing equally upon the left portion of the pericardium, covers in a great measure, the left cavities of the heart. The portion of the pericardium, therefore, which is not ordinarily covered by the lungs, principally belongs to the right cavities, and particularly to two-thirds of the anterior surface of the right ventricle; it presents the figure of a lozenage, and may be from an inch and a half to two inches square. The number of subjects in whom the lungs are found completely to cover the pericardium and the heart are very few.

The heart is formed of two symmetrical halves, and if such an expression may be allowed, of two hearts placed back to back (adossés l'un á l'autre); the one right, anterior, and inferior, the other left, posterior, and superior. This division of the heart is marked externally by a slight depression running along its surface, which is traversed by the cardiac vessels. Another depression which is circular and deeper, seperates the heart transversely into two other unequal parts, called auricles and ventricles.

Thus the heart is really a double organ, composed of four cavities, viz. two ventricles and two auricles; the former constituting in some measure the body of the pump, represented by the heart, the latter forming the reservoir. Each heart is composed of one auricle and one ventricle, which in a healthy adult, do not directly communicate with the corresponding cavities of the opposite heart.

The two ventricles form the principal part of the heart, constituting its two anterior or inferior thirds. The left ventricle is thicker, stronger, and more muscular than the right; a large vessel called the aorta is given off from its base; and another arises from the base of the right ventricle designated the pulmonary artery.

The auricles, surmounted at their anterior part by the appendix auricularis, (a sort of prolongation which has been compared to a dog's ear, of which the outside edge is irregular), receive the insertion of several veins; the superior and inferior venæ cavæ being for the right auricle, and the four pulmonary veins for the left. This relation of different parts of the heart with the large vessels has caused the right ventricle to be called the pulmonary ventricle, and the left the aortic ventricle; the left auricle the sinus of the venæ cavæ, and the right auricle the sinus of the pulmonary veins.

The four cavities of which the heart is composed have parietes of unequal density. The left and right cavities are so disposed that, in the adult, they do not immediately communicate with one another.

But the two cavities of each half of the heart communicate by means of an opening called the auriculo-ventricular orifice.

The cavity of the ventricles separated from each other by a common partition, presents the orifices of the pulmonary arteries and aorta.

The aortic and pulmonary orifices, as well as the right and left auriculo-venticular orifices, are furnished with membranous folds, called valves. There are three valves to each of the aortic and pulmonary orifices, which are designated the sigmoid valves, a denomination which gives a sufficient idea of their figure; they are also called semi-lunar valves. In the middle of the free edge of each of these valves there is a small projection, called the tubercle of Aurantius. The valves which are adapted to the auriculo-ventricular orifices have their free edges indented by a great number of small denticulations, and are, moreover, deeply divided into *three* principal tongues in the right and *two* in the left ventricle. From this arrangement the right auriculo-ventricular valve is called the tricuspid valve, and the left the bicuspid valve, or valvula mitralis. When the valves are raised, they hermetically close the orifices to which they are adapted, like the suckers of a pump.

The circumference of the auriculo-ventricular orifices is elliptical, whilst that of the orifice of the aorta and the pulmonary artery is circular. These apertures are bordered by a whitish line or zone, more apparent on the side of the auricles, which is caused by the projection of a fibrous or tendinous ring enclosed in the substance of the heart.

The cavity of the two ventricles is not exactly of the same form; that of the right is an irregular oval, that of the left

is conoidal. The right cavity is larger than the left, while the latter is higher or longer than the former. The apex of the heart belongs exclusively to the left ventricle, as the cavity of the right ventricle does not descend so low as that of the left. The direction of the cavity of the left ventricle is not parallel to that of the right; on the contrary, the axis of the former, ideally prolonged, crosses the axis of the latter at an acute angle. Let us examine still more minutely the arrangement of the cavity of each ventricle. It is an interesting point of anatomy, on which our predecessors have scarcely touched.

The cavity of each ventricle is composed of two very distinct portions; the one almost directly opens into the auriculo-ventricular orifice, the other, on the contrary, empties itself into the arterial orifice situated at the base of each ventricle.

These two portions of the ventricular cavity are not precisely constituted in the same manner on the right and left sides. In the right ventricle the pulmonary portion (I call it thus because it opens into the pulmonary artery), is united to the auricular portion (that which opens into the auricle), in a sort of angle, the sinus of which is turned upwards.

In the left ventricle, the aortic and auricular regions or portions are parallel to one another, and take a vertical direction *.

They are separated from each other by the right or anterior lamina of the bicuspid valve, and by two large fleshy columns, inserted there by numerous tendons: it is beneath, behind, and outside of this partition or bridge that the auricular portion is situated, whereas the aortic portion, which is larger than the other, is situated above, forwards, and inwards. The two portions communicate freely at that part which separates the two fleshy columns already mentioned.

It is in the auricular portion of each ventricle that the principal fleshy columns exist. There is even a considerable portion of the aortic and pulmonary regions completely destitute of them. Those that are found there are very small, interlaced, and are not inserted in the valves, like the principal ones found in the auricular portions.

* From the conical form of the ventricle, these two regions approach each other in proportion as they proceed from the base of this ventricle to its apex; therefore they are not exactly parallel.—*M. Bouillaud.*

The muscular fibres of the heart unite in fasciculi, and form in the interior cavities of that organ, what anatomists and physiologists call the fleshy columns of the heart, which differ according as they are examined in the auricles or ventricles, or even in each one of these cavities. Thus, they are more clearly marked in the ventricles than in the auricles; and they are more numerous in the right than in the left ventricle, although those in the latter are more voluminous than those in the former; thus also, the right auricle is provided with them to a considerable extent, whilst the left auricle only contains them in its appendages.

The internal surface of the ventricles presents the aspect of a sort of net, the meshes of which are of unequal size, and the threads of different thickness, on account of the interlacings of several carneæ columnæ. Some of these fleshy columns, being unconnected with the heart throughout their middle portion, are only attached by their extremities, and their contractions act like the string of a bow. Some of these fleshy columns, that are free only at one extremity, give rise to a number of small tendons (chordæ tendinæ), which are inserted in the free edge of the auriculo-ventricular valves.

M. Bouillaud is the first who, with particular exactness, has described the fleshy columns, which he considers as true special muscles, whose function is to raise the valves that are depressed during the diastole of the ventricles, and thus produce occlusion of the orifices.

There are two fleshy columns that are sometimes as large as the little finger, projecting into the interior of the left ventricular cavity, which rise by numerous fasciculi from the posterior paries of the ventricles, the one outwards, towards the junction of the anterior surface of this cavity with its posterior surface, to form the left border of the heart; the other inwards, a little on this side of the sinus, where the posterior surface of the ventricle is joined to the inter-ventricular partition. The two columns that we are describing, after having as it were taken root near the apex of the heart, run from below upwards, and at about half the height of the ventricular cavity, they become completely detached from the paries whence they sprung, and terminate in a soft rounded extremity, of which the remarkable and almost invariable disposition has not been well described by any anatomist.

This extremity is divided into several

fasciculi, which afterwards unite so as to form but two or three principal bundles; the convolution of these, form an incomplete circle, that is to say, hollowed at the side towards which the two columns are reciprocally turned. One of these bundles which we have just mentioned is anterior or superior, the other posterior or inferior; each posterior bundle is a little shorter and somewhat smaller than the corresponding anterior bundle. Several tendons arise from the anterior bundle of each column, and are inserted in the anterior lamina of the bicuspid valve; they radiate like the folds of a fan. Other tendons arise from each posterior bundle, which are also radiated, and are inserted in the posterior lamina of the bicuspid valve. Tendons are likewise inserted in the angles formed by the union of the two laminæ of this valve, so that all the elliptical circumference of the valve is provided with tendinous filaments, which are subdivisions of those that have been already described as arising from the extremity of the double terminating bundle of each column.

At the part where the two columns already mentioned seperate into bundles, they leave when the cavity of the ventricle is dilated, an interval between them of eight, ten, or twelve lines; whence it seems that, the tendons of these columns at this point are at a considerable distance from each other, whilst, from their reciprocal convergence towards the middle of the border of the lamina of each valve, they soon approximate, and their sides nearly touch at the point of their common insertion. It results from what we have already said, that nothing can be more regular than the manner in which the mitral valve receives the tendinous filaments of the anterior lamina, while those of the posterior lamina are given off from the bundles of the columns described, and in all cases each of these columns is inserted into only the half of the corresponding double lamina of the valve.

The right column as also the tendons that arise from it, are in general rather more voluminous than the left column and its tendons. I have three or four times tried to count the tendinous filaments that belong to the mitral valve, and found their number to be about twenty-five.

A number of fine tendinous filaments also arise from the columns we are describing, as well as from much smaller columns that traverse the ventricular surface, in different directions; the insertion of these takes place, not at the mitral valve, but at the ventricular parietes.

In the interval that seperates the two levator muscles of the bicuspid valve there exists some fleshy bundles passing transversely from one to the other, and which seem destined to bring them together, or at least to keep them in their position.

Besides the two principal columns already mentioned, we find in some subjects other columns much smaller, that are inserted by tendinous filaments into the circumference of the mitral valve; but even in these cases these latter columns seem to be only adjacent appendages of the two principal ones.

When the two laminæ of the bicuspid valve are depressed and separated as much as possible from one another, as when the blood passes from the auricle to the ventricle, the fleshy columns, which are there inserted, as already described, are evidently intended, by contracting during the systole, to elevate the depressed laminæ of the valve, as they draw them at all points from the circumference to the centre. It is for this reason that I have described these muscular columns under the name of *tensor*, *elevator*, or *abductor* muscles of the mitral valve. In consequence of the approximative movement which these two columns impress on the opposite laminæ of the bicuspid valve, the left auriculo-ventricular orifice is, as it were, hermetically closed.

The laminæ of the valve being thus once drawn together, remain immoveable during the whole time that the contractions of their columns lasts, and cannot be either raised or depressed upon the parietes of the auricle by the impulse of the blood which presses the contracted ventricle on all sides.

When the levatores of the mitral valve contract, their corresponding surfaces approximate in some degree; in fact, during this contraction, all the left or auricular half of the left ventricle is very nearly obliterated, whilst the other half launches the column of blood which it has received from the left auricle into the aorta.

This portion is then a sort of sinus which leaves a passage for the blood during the dilatation of the ventricle, and closes during its contraction by the mechanism already explained. The communication between this portion of the ventricle and the aortic portion is situated in the interval that separates the two principal

fleshy columns already mentioned, that move the bicuspid valve, as those of the columns of the left ventricle, and thus form a kind of hollow tendinous cone, whose base is at the circumference of the tricuspid valve.

Besides the tendons furnished to this valve by the three columns already mentioned, it still receives others from the small columns dispersed here and there on the surface of the ventricle; or, in fine, there are others also which arise immediately from the parietes of the ventricle, quite close to the circumference of the right auriculo-ventricular orifice. Moreover, the columns which thus send tendons to the bicuspid valve, have evidently the same functions as those which comport, in an analagous manner, with regard to the bicuspid valve;—these really constitute the elevators and tensors of the bicuscipid valve. These muscles, by contracting when the three laminæ, or parts of this valve, are depressed, draw them from all parts of their circumference to the centre, and by this mechanism the right auriculo-ventricular orifice is exactly closed. The columns and their tendons close the valve. The fleshy columns of the right ventricle are more numerous, but less voluminous, than those of the left; they do not exactly follow the same direction or arrangement. Those whose tendons are inserted in the free edge of the tricuspid valve, are more than two in number. There are three principal ones among them: they are not divided at their extremity, like those of the left ventricle, into bundles, which distribute their tendinous filaments to the two opposite laminæ of the valve. The tendons of these three principal columns take the same divergent direction when it is once elevated, from being depressed on the side of the parieties of the corresponding auricle."

It was necessary to give this dercription of the centre of circulation, taken from the excellent work of M. Bouillaud, and particularly the description of the mechanism of the play of the valves, which performs so important a part in the formation of the bruits of the heart.

M. R.

THE COLLEGE OF SURGEONS.

The learned council of this scientific body have, consistent with their fervent spirit of reform, passed a by-law, by which all persons shall be henceforth prohibited from teaching anatomy, without first subjecting themselves to a rigorous examination before them. This by-law could only have originated in the full hope and expectation that they will now have it in their power to give a check to anatomical pursuits, and prevent all rivalry and competition to their own interests.

We are happy to state that all the most important measures of reform which have been and are taking place in the College, though they may not have originated, yet have the countenance and support of that ultra-radical, Mr. Lawrence.

PRIZES BY THE ROYAL IRISH ACADEMY.

In 1834, it was advertised in all our universities here, that the Royal Academy of Dublin would give a gold medal for the best essay on three different subjects, which were mentioned. These essays were to be accompanied by a letter, on the back of which was a motto that corresponded to a motto written on the essay, and in each letter was to be written the author's name and address. All these essays were to be given in before Oct. 1, 1835. October, 1836, is now over, and nothing has yet been heard of Academy, essays, or anything about the matter. Would you give some information through your excellent journal, and oblige

A constant Reader.

Henbane and Matrimonial Quarrels.—Dr. Sigmond in his lectures, speaking on the effects of different medicines, mentions the following extraordinary effect of henbane on some individuals. It is of a couple of well-behaved married people, who had always lived on the most affectionate terms, and with good conjugal feelings one for the other,—almost a pattern of connubial happiness; but it was observed that when this amiable couple had spent some time in a particular room in the house, they became engaged in a most violent and desperate quarrel, as everywhere else they were fond and well-behaved. The room was considered enchanted; but after some time the mystery was dissolved, by the discovery that these terrible disputes were owing to a quantity of hyoscyamus (henbane) placed near a stove, and as soon as it was removed, perfect harmony was restored.

All communications, books for review, and advertisements, to be forwarded (postage free) to the Editor, 8, Argyll-place, Regent-street; or to E. COX, Medical Bookseller and Publisher, St. Thomas's-street, Southwark.

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A PRACTICAL ESSAY

ON THE

TREATMENT OF FRACTURES OF THE BONES OF THE LOWER EXTREMITY,

Illustrating Chiefly the Successful Treatment of Fractures of the Thigh Bone, in the extended Position with the Apparatus employed in the North London Hospital, and the Comparative Superiority of this Plan of Treatment over that of the Double Inclined Plane; with Cases. (Read before the Medical Society of the London University).

By Wm. Hallam, Esq., M.R.C.S. Lond.

House Surgeon to the North London Hospital.

Gentlemen,—It is my intention this evening to offer to you some few remarks on the treatment of fractures of the bones of the lower extremity, and to endeavour to demonstrate to you the application of the apparatus, employed in these cases in the North London Hospital, where I have been in attendance since the institution first opened, and have of late been engaged in the practical duties of dresser and house surgeon, and on this account perhaps I may be allowed to state, that I have had opportunities afforded me of witnessing the treatment and result of cases, more advantageously than the general mass of gentlemen who attend the practice of the surgeons.

I have chosen the subject of the treatment of fractures of the lower extremity, in preference to those of the upper, not only because they are more interesting to the surgeon in a practical point of view, as requiring greater skill in their management, and in the application of mechanical means for their cure; but because I have not had the opportunity of watching the progress of common fractures of the bones of the arm and forearm, or of keeping correct records of cases of these accidents, none except severe cases, or compound fractures, being taken into the hospital to be treated. Besides from the case books it appears, that we have had since the Hospital opened, more than a third more cases of fractures of the lower extremity, than of the upper; this can only be accounted for by the fact, that most surgeons in private practice treat poor patients for fractures of the arm, because they do not require to be visited at their own habitations, whereas had they broken thighs, or legs, they would require attendance, and are consequently sent to the different hospitals as in-patients.

I need not tell you, that in the treatment of these mechanical injuries a thorough knowledge of the anatomy of the bones concerned, and of the origins and insertions of the muscles or moving agents is indispensable, in order to understand the causes and varieties of displacement, and the proper treatment to be adopted. A certain amount too of mechanical knowledge is also necessary, but these requisites most of you no doubt possess.

It will be necessary for me as I proceed, to make some few observations on the different varieties of fracture, and the situations where they occur, in order to illustrate the treatment, but I shall refrain from saying any thing except where it is absolutely necessary, about the causes, symptoms, or complications of fractures, or of their modes of union or varieties of displacement, these various topics, will be well described in the lectures on surgery given here, or those who do not attend the class can read them at their leisure in the works of the venerable and indefatigable professor of surgery to this institution, works which as long as surgery is cultivated as a science will ever remain a lasting memorial of their illustrious author.

Under ordinary circumstances we put up all our fractures, whether simple or compound, as soon as they are brought to the hospital, unless there is some unusual complication, such as hemorrhage,

or when the accident has been done some hours, and a good deal of swelling has ensued from effusion of blood, &c. Our object in doing this, is to prevent any swelling of consequence ensuing, and this is done successfully in most cases by properly setting the fracture, by elevating the limb to facilitate the return of blood by the veins, by keeping the fractured limb perfectly at rest, and by the judicious application of bandages and splints to steady the limb. We seldom or never have occasion to use leeches or cold lotions in the treatment of fractures, bruises, or sprains. However severe, position, rest, and fomentations are the grand means we make use of, and we generally find them effectual. I have looked over every case of fracture of the lower extremity which has been under the care of Mr. Liston, since the opening of the hospital, and in only one case has it been necessary to apply leeches, this was a case of fracture of the fibula with dislocation of the ancle. Indeed you would be astonished at the small number of leeches we use in our surgical practice.

I may just state to you that fractures produced by direct violence, as for instance, by a blow, the fall of a heavy body, &c., are generally transverse. Oblique fractures on the contrary are mostly produced by indirect violence, or force applied in the direction of the axis of the bone; for example, suppose a person comes to you and states that he has broken one of the bones of his arm or his leg, he tells you that he heard the bone snap, you will ask him how the accident occurred, he tells you that he fell upon his hand in the one case, or that he slipped off the curbstone in the other. In the first case it is probable (if both bones be not broken) that you will find an oblique fracture of the radius, in the last an oblique fracture of the fibula, both having given way at their weakest points. You will generally find that compound fractures are oblique or comminuted.

Crepitus is the only unequivocal sign of a fractured bone, this is the symptom you must look for in order to make a correct diagnosis. It requires a good deal of nicety of manipulation or "tactus eruditus," some time to make out this crepitus, especially where much swelling has ensued, or there is little or no displacement of the fracture. By careful examination you will in most cases, however, be able to detect it, but I would advise you not to torment or put the poor patient to unnecessaay pain by repeated attempts to discover it. In examining a fracture which is supposed to be compound, in consequence of the existence of a wound over the seat of fracture, the practice of probing as it is frequently done to ascertain whether it communicates with the fracture or not, is much to be reprobated, even if it does, then there can be no benefit, in putting the patient to unnecessary pain by pushing about a probe to ascertain whether the bone is broken into three or half a dozen pieces. Probing not only gives the patient a great deal of unnecessary pain, but in numerous cases it creates severe constitutional disturbance, excites inflammation and suppuration, or even in some cases, like the above, may convert a simple into a compound fracture.

Where much swelling has ensued, you may be able in some cases to feel crepitus, but cannot tell exactly at what point the bone is fractured; or, where there are two bones, as in the leg, for instance, which of them is fractured. Those of you who attend the hospital have seen the case of the policeman Agin, under Mr. Cooper's care (Ward 2, Bed 1). He was brought to the hospital three weeks ago with a fracture of the fibula, caused by his slipping off the curbstone. The bone was broken higher up than it usually is, about an inch and half below its middle. There was very little displacement. The accident had occurred two days previous to his admission, and had been treated as a sprain. On his admission the limb was much swollen, and ecchymosed over the outer side to a considerable extent. On careful examination, the crepitus of a fractured bone was distinctly audible, but where it proceeded from could not be ascertained in consequence of the swelling. There was no irregularity of the front surface of the tibia, yet the crepitus seemed to arise from fracture of this bone. Mr. Cooper and Mr. Quain examined the limb, but could find no fracture. The limb was placed on the inclined plane, kept elevated and at rest, and warm fomentations were applied. In two or three days the swelling subsided almost entirely, and fracture of the fibula, at the point above mentioned, was very easily detected, both by crepitus and an evident depression of the lower fragment at that point.

Crepitus cannot be felt sometimes, although a fracture exists, in consequence of the broken fragments of bone being firmly wedged together. There was a case illustrative of this in the hospital

during the time I was dresser to Mr. Liston. The patient was a man named Martin. He was admitted in consequence of a compound fracture of the humerus, extending into the elbow joint, and some obscure injury about the hip of the same side. The surgeon who had seen him before his admission stated that it was merely a contusion. The extremity, however, was shortened about one inch, the toes were everted, and the limb lay on its outer side. From these symptoms it was inferred that there might be a fracture of the neck or upper third of the bone; but the only sure sign of this, crepitus, was not to be discovered by the most careful manipulation or the use of the stethoscope. Mr. Liston examined the case, and stated that there was no fracture, for the man could flex the thigh on the pelvis with ease. He thought the everted state of the foot might be accounted for in consequence of the man having had the leg broken some years ago, which was treated in St. Bartholomew's Hospital on Pott's plan. This case went on well; and Mr. Wallis, who was the house surgeon to the hospital, thinking the affection of the hip would be no impediment, made the man get out of bed. When he got up he was unable to put his foot to the ground, on account of pain in the hip about the joint. Mr. W., being much surprised at this, examined the limb again, and detected a fracture, extending evidently through the trochanters, for crepitus was now with ease to be felt on drawing down the limb and rotating it inwards, the palm of the hand being at the same time applied over the great trochanter. Mr. Liston confirmed Mr. W.'s diagnosis. The fracture was put up with the long splint, and the case did well.

Sir A. Cooper relates a case in which fracture was not detected until the twenty-fifth day, though Sir B. Brodie and two other surgeons examined the limb carefully and repeatedly. Also another case, where a girl of sixteen, after a fall, walked home, and several days afterwards applied for admission into Guy's Hospital, where she was under the care of Dr. Bright. She even continued to walk after her admission into the hospital. Sir A. Cooper examined the limb carefully on several successive days, but could not detect crepitus. The limb appeared about half an inch longer than the other, but the foot was everted. She had all the motions of the joint except rotation inwards. She died on the ninth day after the accident. On examination after death, the trochanter major was found fractured from the neck and body of the bone, but was retained in very close apposition, as the tendons of the glutæi and vastus externus were not at all lacerated. Crepitus also is prevented from being made out by several other causes which you will find detailed in the different books on surgery. It would be occupying too much of your time to enter into the consideration of these, and I shall therefore without delay proceed with the subject of fractures of the thigh bone. These, may be divided for our purpose into,—fractures about the neck of the bone and the trochanters, fractures of the shaft of the bone, and fractures of the lower end and through the condyles.

At the present day there are three plans of treating fractures of the thigh bone.

1. In the extended position.
2. On the double inclined plane.
3. On the plan of Mr. Pott.

Each of the two former plans has for its advocates several surgeons of eminence. Pott's plan is now nearly obsolete; and, as I have but little to say about it, I shall dismiss it first by just describing to you his method of treatment. Before doing so, I may state to you that I have never seen the plan adopted, and therefore cannot speak of its ill success from any experience of my own. The thigh, leg, and pelvis are placed on the outer side. The thigh flexed on the pelvis, the leg on the thigh; the thigh is laid on a short wooden splint, hollowed and padded, a many-tailed bandage being previously applied. The knee and foot should be supported by pads or cushions. The objections to this plan, which is now abandoned by most surgeons, are that it leaves the joints connected with the fractured bone unrestrained and liable to be moved at the will of the patient, directly opposed to the general principle of keeping the joints connected with a fractured bone fixed. The position, too, in which the patient lies is irksome and uncomfortable; and it is ascertained from experience that this plan of treatment is more frequently followed by deformity than any other.

Mr. Liston, in his Elements of Surgery, says, "there is no possibility of treating fractures of the thigh with any satisfaction or credit on the outside of the limb with the knee bent, however attentively the splints are placed; shortening, eversion of the foot, and deformity of the whole limb are sure to follow."

The next plan of treating fractures of the thigh bone which I shall proceed to consider is on the double inclined plane, a plan which is advocated by many eminent surgeons, amongst whom may be mentioned Sir Charles Bell and the late Baron Dupuytren. The patient is laid on his back with his shoulders a little raised, so as to place him somewhat in the sitting posture; the limb is then placed on the apparatus, the thigh being flexed upon the pelvis, and the leg upon the thigh. There are several modifications of double inclined planes. The one made use of in several of the London hospitals is very simple; it is made of two pieces of wood with a hinge or joint in the middle. The fracture-bed of Mr. Earle may be converted into this kind of apparatus. Amesbury's apparatus is a very good one, but is too expensive and too complicated for general use. The one we make use of is constructed by Mr. M'Intire, of Newcastle-upon-Tyne, surgeon to the infirmary; or at least made under his direction. It has all the advantages of Amesbury's, and is much cheaper. Most of our fractures of the leg are treated on this apparatus. The surgeons at St. Thomas's, Guy's, and St. Bartholomew's seem to give a general preference to the double inclined plane in the treatment of their broken thighs; and from what I have been able to learn they turn out well generally. At the Middlesex Hospital, also, all the surgeons, except Mr. Mayo, give a preference to the bent position. This latter gentleman now advocates the extended position. You find it stated in books that the bent position is the best calculated to relax the various muscles attached to the thigh bone, which have the greatest power of producing displacement; but if we appeal to facts, we shall find that the muscles do not act in a fractured limb as they do in a sound one. Even fractures of the thigh bone very high up the shaft, for instance, just below the trochanters, where it is most likely for the psoas and iliacus to draw up the upper fragment, are successfully treated in our hospital in the extended position. It is certain that these muscles at first do produce displacement, but by keeping up moderate extension they soon get tired of acting, the fragments giving the patient pain in their unnatural position soon fall together, and keep so. We have had several cases of fracture of the thigh bone high up the shaft and about the neck, which have all been successfully treated in the extended position. The following cases are illustrative of what I have just stated.

William Holland, nine years of age, was admitted into the hospital on the 24th of November, 1834, with an oblique fracture of the left thigh bone, just below the lesser trochanter, caused by the wheel of a cab running over the limb. On his admission the thigh was placed on the double inclined plane, but as the fragments did not keep in opposition, and it was difficult to manage the fracture, Mr. Liston, who had just arrived from Edinburgh, advised the limb to be placed in an extended position. The long splint was consequently applied. He lay much easier than with the other apparatus, and in five weeks after the accident, he was discharged cured. The fracture was well united, the extremity was as long as the other, and there was no eversion of the foot. Some of you will have the opportunity of witnessing the treatment and result of a fracture of the thigh bone with the long splint in this situation, in a boy now under Mr. Liston's care in the hospital; the history of the case is as follows.

William Steward, aged nine years, admitted into the hospital on the evening of the 18th of October last, in consequence of a fracture of the right thigh bone, evidently just below the lesser trochanter. The thigh was greatly deformed by the upper fragment projecting forward, and somewhat swollen. The limb lay on its outer side, with the foot everted, and it was apparently shorter than the sound limb by two inches. The accident was caused by his falling off a wall about four or five feet high, with his leg doubled under him. He says he heard the bone snap, and on attempting to get up, found he was unable to do so. The fracture was easily reduced. The limb was placed in the extended position, and the long splint applied; moderate extension being kept up by means of the perineal band, so as to keep the limb its proper length. The boy has been quite easy since the accident, and it has only been necessary to re-adjust the apparatus once. The fracture is doing well, and I have no doubt the boy will have as useful a limb as the other.

The successful treatment of fractures about the neck of the bone in the extended position, is well illustrated in the following case.

Catherine Matsell, aged twenty-seven years, was admitted into the hospital on the 19th of April last, under the care of Mr. Liston. She states, that yesterday,

in reaching out of the first floor window of her apartment to hang out some clothes to dry, she overbalanced herself, and fell into the area below. On her admission she complained of much pain in the hip, and inability to walk. An examination was made, and the limb found to be shortened about one inch. On flexing the leg on the thigh, and rotating it, crepitus is felt in the inner side of the great trochanter. She is capable of raising the limb a little; the upper part of the thigh is swollen and painful to the touch; it is probable that the fracture extends through the trochanter; the fracture was reduced and the long splint applied. The report states, that the bandages were readjusted on the 27th of April and on the 4th of May, and the apparatus dispensed with on the 4th of June (forty-six days after her admission). She was allowed to walk about the ward on crutches, and on the 22nd left the hospital. There was no shortening or deformity; provisional callus abundant.

We have adopted the extended position in the treatment of more than three-fourths of the cases of broken thighs we have had in the hospital. Desault, I believe, was the first to adopt this method of treating fractures of the thigh. His plan was, after setting or adjusting the fracture, to apply on the outer side of the limb a long straight splint, proportioned in breadth to the size of the thigh, and extending from within a few inches of the axilla, to three or four inches beyond the foot; another on the inner side, extending from the groin to the foot; and another in front of the thigh, from the groin to the patella. The limb was first rolled, and the outer splint, previously padded, was then applied, and the foot then fixed to the lower end of the splint by means of a roller. A soft pad was then placed in the perineum, and a broad tape applied, one end of which is carried underneath the perineum, or rather between the scrotum and thigh, and brought to the posterior fissure in the upper end of the splint, the other end is passed through the anterior fissure, and the two ends are then used to force down the splint, and with it the fractured limb, thus making extension. The ends are then knotted with the reef-knot, so as to prevent the splint from slipping upwards, and thus allowing the limb to shorten. Desault's plan has, like the double inclined plane, been variously modified. Boyer's splint has a sliding piece at the bottom and a screw, to keep up permanent extension from the foot. In our hospital we use but one splint; it is a simple piece of half-inch deal board, from $2\frac{1}{2}$ inches to $3\frac{1}{2}$ or 4 inches wide, according to the bulk of the thigh, and sufficiently long to extend from within 3 or 4 inches of the axilla, to the same distance beyond the foot, perforated at the upper end with two holes, for the ends of the extension band, and notched at the distal end for the purpose of turning the bandage through to secure the foot. To prepare our apparatus for use, we take the splint and a roller, split at the free end in two; the split ends are passed through the holes at the top of the splint, and tied on the outer side; a pad or cushion is then placed on the splint, moderately filled with oaten chaff, and this material, I may observe, is the best for filling pads for fractures, it is also cheaper and more easily procured in the country than hair or tow. It is not so heating as these materials, and adapts itself better to the form of the limb. The roller, which is secured through the holes at the top of the splint, is brought down to its lower end between the pad and the splint, and is then twisted successively over the ancle and dorsum of the foot, and through the notching in its lower end, to fix the foot. This having been done, the perineal band is applied for the purpose of making extension, as in Desault's plan. Our perineal band is the half of a cotton or silk handkerchief, with a portion of tow or wadding wrapped up in it at the point where it is likely to make most pressure. Sufficient extension having been made to make the limb its proper length, and give it the contour of the sound one, the ends of the extension band are knotted. The rest of the limb, viz. from the ancle to the groin, is then secured to the splint by means of the rollers, so as to make the splint and limb one piece. A broad bandage is then applied round the pelvis and splint, making the limb, pelvis, and splint into one piece, and rolling it even.

All the apparatus and matters we require therefore in our hospital, to put up a thigh in the extended position, are, the piece of deal board or splint; the perineal band, made as I have before mentioned, viz. of part of a handkerchief, and a portion of tow wrapped up in it; the chaff pad; three or four bandages, and a little tow, to pad the dorsum of the foot and heel; and two compresses of the same material, to be placed, one over the malleolus externus, and the other over the trochanter major.

(*To be continued.*)

Reports of Cases Treated in the Philadelphia Hospital at Blockley. By W. W. Gerhard, M.D., one of the Physicians.

(Concluded from page 373.)

Case IV.—*Note of the Examination of the Respiration of a patient cured of Gangrene of the Lungs eighteen months previously.*—A seaman, 52 years of age, entered the Pennsylvania Hospital in November, 1834. He was of a stout, robust frame, but considerably emaciated, and stated that his health had been generally good until the summer of 1833, when, after exposure to rain, he was taken suddenly ill, with pain in the right side of the chest, cough and expectoration of yellow viscous matter, of a very fœtid odour. These symptoms came on two days after a copious hæmorrhage from the lungs, when he discharged about a quart of blood; it was repeated, but in less quantity, fourteen hours after, and again at intervals, for a day or two. Since that time he coughs a little, and is subject to shortness of breath, with which he had never been previously affected. There was some fever at the time, but no chills, nor much night sweats. The facts were confirmed by one of the physicians who formerly attended the case, and who then regarded it as one of decided gangrene. The patient remained in the hospital two months, and was afterwards well enough to go to sea, although there still remained a little cough and dyspnœa.

At his entrance, I found the following alterations on the right side of the thorax. The chest was well formed, except a little contraction at the posterior and inferior part of the right side, and a slight depression of the corresponding shoulder. The percussion was very slightly dull near the right clavicle; it was generally dull at the posterior part, but especially so between the scapula and the spine. Percussion sonorous throughout the whole extent of the left side.

The respiration offered some sibilant rhonchus on both sides of the chest, in other respects it was natural on the left. On the right side the inspiration was feeble throughout; no distinct expiratory sound; subcrepitant rhonchus near the base of the lung. Fever moderate; cough, and slight expectoration of white mucus. The disease for which the patient was admitted was regarded as chronic catarrh, with probably a deposit of tubercles.

Remarks.—The signs indicative of the previous gangrene, were limited to the feebleness of the respiration and the dull sound on percussion. The cure of the disease seemed complete, but the patient did not entirely recover his strength, and, at his second entrance into the hospital, was probably tuberculous.

Case V.—*Note of the examination of the Lung of a patient dead nine years after the cure of Gangrene of the Lungs.*—A man between fifty and sixty years of age, entered the Pennsylvania Hospital in the autumn of 1835. A dray had passed over his leg, causing compound fracture of both bones, and extensive contusion of the soft parts. He was of very intemperate habits, and soon after his entrance was taken with delirium tremens, of which he died. Before the delirium came on, his intelligence was remarkably good. Nine years previously, after an injury of the hand, followed by suppuration and sloughing of the tendons, he was attacked by severe disease of the chest, with cough, dyspnœa, and dark sputa, of so offensive a smell that no one could remain in the room with him. There was also pain towards the base of the left axilla. He recovered after several months illness.

The side of the chest affected, yielded a feeble sound during the act of respiration, but, as the attention was not at the moment especially directed to it, my examination was necessarily slight.

On inspection after death, there were adhesions of the lower lobe of the left lung to the ribs. The tissue was less voluminous than usual, denser, and near the larger bronchi there was a flattened cavity an inch long, and of nearly the same breadth, communicating with a bronchial tube, and lined by a smooth membrane, not very unlike that of the smaller bronchi. The other lesions were unimportant.

Remarks.—The variety of gangrene described by the patient, was probably that which often complicates metastatic abscess of the lungs; in this case it followed suppuration of the hand. There could be no doubt of the real nature of this disease, which was well described by the patient. The cyst found after death was very small, but it was only the remains of a large cavity. Its limited extent was clearly owing to the contraction of the tissues during cicatrization. The tissue of the lung presented no other alteration than increase of its density, with partial obliteration of the air-cells,

its colour was darker than usual, and resembled in many respects the splenitized lung of pleurisy.

Case VI.—*Gangrene of the Lungs terminating in death, occurring in a healthy patient, after working in cold, damp rooms.*—A married woman, 41 years of age, of temperate habits, was admitted into the Pennsylvania Hospital on the 18th of May, 1835. Married seventeen years, and has had four children; never ill but once, nine years since, with cough and soreness of the chest, but no severe pain. During the winter was perfectly well; on the 6th of May, went to work in a new house, in which the painters were at work, and very damp. The smell of the paint annoyed her; three days afterwards she became pale, felt weaker, and had much pain throughout the abdomen. She then left the house, and the pains ceased. On the 13th, she complained to her husband of the singular smell of her breath; she was pale and weak; lost her appetite, but had no pain in the side; great thirst and vomiting several times repeated; constipation. On the 14th, increase of these symptoms; cough and expectoration of greenish and yellow matter. In the night of 14th to 15th, severe chill and pain in the left side, but she coughs less when lying on it than on the other; vomiting every day; one or two mouthfuls of blood were spit up on the 15th. She was bled on the 15th, and had mustard applied to the side.

At her entrance, her nose was sharp, face haggard, neither pale nor flushed; lips large and pale; moderate emaciation; cannot lie on right side; sleep natural; intelligence perfect; cerebral functions, in general, natural; voice feeble; no soreness of throat; breath very fœtid, of a gangrenous odour; pain across base of left axilla only felt after coughing; skin moist, of natural warmth, pale, not bronzed; constant nausea and frequent vomiting of food or drinks—even pure water; anorexia; great thirst; no pain in the abdomen; one stool last evening. Pulse 96, feeble; respiration high, 26; cough frequent and hollow; expectoration greenish, thick, running together, very fœtid, of a strong gangrenous odour, nearly eight ounces in twenty-four hours. The percussion was dull throughout the whole left side, especially towards the base of it, and in the axilla. The respiration was feeble throughout this side; there was no bronchial respiration, but a little sibilant rhonchus, with some mucus. Elsewhere the sound of percussion and of respiration were both natural. *Sinapisms to the chest; effervescing draught;* a quarter of a grain of morphia every six hours. She vomited after the morphia. The sputa and breath became more fœtid and brownish on the 21st. There was distinct gurgling on the left side on the 26th. On the 28th, the respiration was amphoric throughout the lower two-thirds of the left side, both anteriorly and posteriorly, with loud liquid gurgling. The sound on percussion, at the same spot, was louder and more hollow than natural. On the right side, there was a little mucous and sonorus rhonchus, but the percussion throughout was nearly as loud as natural.

The expectoration was still greenish, about eight ounces in twenty-four hours; tongue dry at the centre; pulse 106; respiration very irregular, 24 in the minute; extreme anxiety and oppression; countenance livid; skin swarthy; urine natural; cough very frequent and hollow. From this time the anxiety gradually increased until death on the night of the 2nd to the 3d of June. The countenance was more livid and the expectoration nearly ceased in the last twenty-four hours.

Autopsy, June 13th, *thirteen hours after death.—Exterior.* Some emaciation; no infiltration; rigidity moderate; skin a little yellowish, livid porteriorly.

Head not examined.

Neck.—Pharynx rather pale, not ulcerated. Œsophagus pale livid, epithelium detached in parts; no ulcerations. Larynx, bright injection of the mucous membrane, thickening, limited to the vocal cords; no ulcerations.

Trachea injected, neither thickened, ulcerated, nor softened.

Thorax.—Percussion made before the autopsy, is very sonorous on both sides of the chest anteriorly. On the left side, the percussion is extremely sonorous at the posterior part, especially near the middle, where it gives a perfectly hollow sound. On the right side, it is obscure below the scapula. No evident dilatation of the chest. In the left lung the upper lobe grayish, and containing much serum in its whole extent; vesicles twice or thrice the natural size along its anterior margin: no induration, tubercles, or gray granulations. Lower lobe strongly adherent to the pleura by a firm yellowish false membrane nearly two lines thick. The pulmonary tissue retains its grayish colour in the upper inch, is infiltrated with serosity but not granulated, and contains

air—the lower three-fourths of the lobe forms a vast cavity, filled with a dark greenish liquid of a strong gangrenous odour; the sides of the cavity are formed of sphacelated tissue similar in colour to the liquid. There is no hardening or injection of the tissue near the cavity; it remains soft and only a little more infiltrated with serum than usual. Bronchi, reddened and thickened near the cavity; some partially eroded, others are completely cut off on reaching the gangrenous liquid. The right lung is permeable to the air throughout, but near its root it is of a dark gray colour and infiltrated with serum. The heart was pale and flaccid. The other viscera were carefully examined, and were entirely free from any lesion worthy of mention.

Remarks.—The gangrene occurred in a healthy woman, and came on as insiduously as in the other cases. The earliest symptoms were the feebleness, nausea and fœtid breath. The cough occurred at a later period, and the pain in the side was not felt until a secondary pleurisy complicated the disease of the pulmonary tissue. Thus the gravest disorganization of the parenchyma of the lungs is almost entirely unattended with pain as long as the pleura is not implicated. The physical signs did not materially differ from those observed in the cases which terminated in recovery, nor was the extent of the gangrene so great as in one of these cases, (No. III.) where the lower lobe of both lungs was involved. The most unfavourable symptoms in the case were the high fever and extensive pleurisy. There was so much irritability of the stomach that neither food, medicine, nor drinks could be taken in sufficient quantities. A blister was applied to the chest, but it failed to relieve the patient. Had the disease been steadily treated from the first day, or had the bleeding which was resorted to on the day after the supervention of the pleurisy, been properly followed up by other appropriate means, other results might have followed. The indication was clearly to check the secondary inflammation by the usual remedies and to keep up the patient's strength by opiates and a supporting treatment, until the progress of the gangrene could be arrested.

Case VII. *Gangrene of the right lung, following Gangrene of the Mouth. Perforation of Pleura. Pleuro-pneumonia.*—A labourer, aged thirty-six years, was admitted on the 10th of April, 1836. In July last, taken with rheumatic pains not attended by swelling of the joints. These pains occurred after he had been obliged to work in the water, and never ceased until his entrance. In November, he was received into the hospital with mania-a-potu, and on his recovery was employed as a labourer in the yards of the building, still suffering from pains. Previously to the rheumatism, he had generally been in good health, although ill two or three times with fever.

On the 9th of April, he was taken with severe pain and swelling of the joints, fever and profuse sweats, but no chills. At his entrance, the pulse was full and of good strength. There was pain and soreness at the knees and elbows; flat sound on percussion from the middle of the sternum to the distance of an inch beyond the left nipple, and from two and a half inches above the nipple to the base of the thorax. Pulsations of heart feeble, impulse slight; imperfect bellows sound in the first sound of the heart, second sound feeble.

He was treated by venesection twice of 16 and 12 ounces. Tartarized antimony gr. one-sixth, nitrat. potass. gr. vj. q q h. lemonade, broth and gruel. A Dover's powder was afterwards added at bed-time. Hop poultices to the most painful joints. The last bleeding was directed on the 16th, on which day his breath became a little fœtid and gums swollen, as if from incipient ptyalism. The blood was cupped and buffed. On the 17th, he complained of nausea and weakness; on the 18th, the fœtor of the breath was much increased: the lower lip swollen, and a whitish slough around the root of the teeth, and on the inner side of the cheek. Salivation abundant; less rheumatic swelling; no chills; sweat copious; pulse 120, less strong. Quinine 16 grains in 24 hours; pulv. Dover, at night; dry chloride of lime to the sloughs, and frequent gargling with solution of chloride of soda; broth; bread. From the 24th to the 27th, a large slough had formed on the inside of the cheek; on the 28th, its separation commenced, and the cicatrization was complete on the 10th or 12th of May. He was quite well for nine days, and rapidly regaining his strength. About the 15th, slight cough; a little mucous rhonchus and expectoration. On the 22d, loss of appetite; chills and sweats after the fits of cough; no pain in the breast or limbs. On the 23d, at 7 A. M., he was sitting quietly in his bed, when he felt a sudden sense of oppression, and after a little coughing, threw up

a large quantity of blood, not less than a pint and a half in the twenty hours, during which the hæmoptysis lasted. It was very red and liquid, but not very frothy, and seemed to the patient to come from both sides of the chest. Cough very loose and frequent. The percussion was dull throughout the whole of the right side, especially near the base. Respiration feeble and mixed with much rhonchus at the lower lobe. Percussion sonorous and respiration vesicular in the left lung.

The acetate of lead two grains, with half a grain of opium, were given every hour until he had taken four pills, when the hæmoptysis ceased. (Tea; bread; gruel). On the 24th, the acetate of lead was repeated every three hours, and cups applied between the shoulders; countenance of patient very anxious; great dyspnœa; pulse feeble, and skin cool. The sugar of lead was given in small doses for one day more, although the hæmoptysis did not return. On the 26th, sense of smothering at the chest; expectoration still contains a little blood, is brownish and frothy, of a very fœtid smell; the cough was frequent; thirst; anorexia; cold sweats; pulse 120, quick, of larger volume; respiration 44, high; cavernous at the middle and base of the right lung; percussion dull throughout this side, except at the summit. (Blister to the right side; one grain and a half of morphia during the twenty-four hours; mucilage; two Seidlitz powders; gruel). On the 28th, there was decided gurgling and cavernous rhonchus at the summit of the lung; the expectoration amounted to a pint and a half in the twenty-four hours; it was a black liquid, like very thin ink, very fœtid; skin cooler; pulse 116, larger; respiration 44. A blister was again applied to the side, when on rising to go to the close stool, he vomited a quantity of a dark thin liquid: the expectoration now became more thick and yellowish. On the 30th, no pain in the side; respiration 36; pulse 108, regular and quick; less sweating; emaciation increasing.

Porter; morphia solution; infusion of Prunus Virginiana; solution of chloride of soda.

On the 1st of June, he had slept badly; much more dyspnœa; pain renewed in the right side; decubitus high; respiration 52, very high; pulse 120, regular and feeble; expectoration yellowish green, very fœtid (like putrid oysters), in ill-defined masses; skin cool and clammy; percussion of right side still dull; strong amphoric respiration at the whole posterior part, especially at the root of the lung; and very loud and liquid gurgling when the patient coughs; amphoric resonance of the voice; the same character can be distinguished at the summit of the lung anteriorly, with feeble respiration towards the base; on the left side the percussion is sonorous; respiration pure and normal, except near the summit of the lung, where it is a little blowing.

Tincture of bark; ℥j. q. hora; porter; milk punch; two eggs daily; broth; biscuit.

On the 2nd of June, much prostration and dyspnœa; expectoration yellowish, rather less fœtid. Death on the morning of the 3rd.

Autopsy, thirty hours after death—*Exterior.*—Rigidity general; moderate emaciation; no lividity at the posterior part of the body.

Thorax.—Sound of percussion preternaturally loud throughout the right side, especially at the lower and lateral portion; no alteration of conformation; right pleura adherent at the part corresponding to the upper and middle lobes; at the lower lobe the surface of the lung and the costal pleura are covered with irregular patches of whitish lymph, very adherent to the surface of the lung, which is strongly injected; in the cavity of the pleura there were six or eight ounces of turbid, greenish liquid, of a very fœtid odour. The upper lobe is pervious to the air, pale, but a little infiltrated with serum in its anterior half; reddish, and completely hepatized at its posterior part. The middle lobe is also indurated and impervious to the air, but not distinctly granulated. The lower lobe offers, at its upper portion, a cavity of the size and form of a large pear, filled with a greenish-black gangrenous liquid, in which are numerous shreds of the pulmonary tissue, consisting chiefly of the vascular branches, soft and putrid. The cavity was lined with a false membrane throughout nearly its whole extent, although in some parts the gangrenous pulmonary tissue forms its limit; the false membrane is of a yellowish white colour, of the thickness of common writing paper. The bronchi are cut off abruptly on reaching the cavity, and do not extend beyond its margin; their mucous coat is red and thickened; at the upper and outer part of the cavity is a perforation communicating with the cavity of the pleura, large enough to admit the passage of a common goose quill; it is placed in the middle of an irregular depression of a dull white

colour, formed by the pleura altered in structure. The tissue of the lung around the cavity is hardened, infiltrated with serum, and of a deeper red than in the upper lobe. The left lung is covered by a delicate reticulated false membrane, imperfectly formed, easily removed from the pleura, which is perfectly smooth, though brightly injected; there are a few ounces of serum in its cavity; the tissue of the lung is infiltrated with serum, but pale, and everywhere contains air; bronchi pale; no trace of tubercles or granulations in any part of the lung. *Bronchial glands* firm and paler than usual. *Larynx* pale, but the mucous coat of the trachea is reddened and thickened. *Heart* rather paler than usual, large, watery coagula in the cavities of each side; slight cartilaginous deposites at the base of the semilunar valves of the aorta and mitral valves. *Stomach* distended by a white liquid of a strong acid odour; mucous coat of a dull white in the cardiac two-thirds, traversed by bluish veins, and of pulpy consistence; in the rest of its extent of a pale slate colour, mammillated, a little thickened and firm. The large and small *intestines* were both firm and pale, but lined by a thick coating of whitish mucus. Glands of Peyer pale, and not developed as much as usual. Mesenteric glands pale and firm. *Liver* of the usual colour and consistence. *Spleen* slightly enlarged and pulpy. *Kidneys* firm and normal. *Bladder* contracted. The *brain* contained less blood than usual in its veins, and throughout its substance, and was unusually firm.

Remarks.—This case illustrates several important points in the history of gangrene of the lungs. The patient had been the victim of a chronic disease for some months, and had just recovered from an attack of inflammatory rheumatism, for which he was treated by bloodletting and other debilitating remedies. During his convalescence, gangrene of the mouth occurred, an affection at that time almost endemic in the hospital. I then expressed my fears that it might be followed by gangrene of the lungs; these fears increased when his cough began, and were finally realized by the sudden occurrence of profuse hæmoptysis (a common precursor of gangrene), followed by fœtid dark expectoration, mucous rhonchus, gurgling and cavernous respiration. The patient was treated as the others had been; the fever, cough, and dyspnœa diminished when the unexpected perforation of the pleura gave rise to a new set of symptoms, and finally caused the death of the patient. The signs of the perforation were the amphoric respiration, the liquid gurgling, and the change in the appearance and odour of the sputa. These changes seemed to arise from the discharge of a portion of the contents of the pleura through the bronchi. At the same time there was a sudden increase in the severity of the dyspnœa and fever.

On the examination after death, it was shown that the progress of the gangrene had been arrested by the formation of a false membrane, enclosing that portion of the sloughing tissue which was not yet removed. If the cicatrization had not been arrested by the pleurisy, which followed the perforation, the patient would have recovered. The pneumonia was probably consecutive to the gangrene, but as the symptoms which marked the origin of these affections were to a great extent confounded with each other, it is not certain whether the pneumonia was a mere effect of the irritation of the gangrene, or whether it had preceded the mortification and had acted as its exciting cause. The pleurisy was evidently a mere consequence of the gangrene.

INTRODUCTORY LECTURE

TO A COURSE

ON THE

PRINCIPLES AND PRACTICE OF MEDICINE,

Delivered at the Hunterian School of Medicine, *Great Windmill-street.—Session* 1836-37.

By Dr. Ryan.

INTRODUCTORY ADDRESS.

The Universities and Schools of Medicine, of all civilized countries, have wisely decreed, that students of medicine, should acquire a correct knowledge of the science, before they commence the study of the practice of the healing art; and in accordance with this judicious regulation, it is deemed expedient to give an outline of the institutions or principles of medicine, previous to the description of the symptoms, causes, diagnosis, prognosis, and treatment of diseases. It is an axiom, that correct principles are indespensably requisite for the basis of judicious and successful practice. Every educated practitioner of the healing art admits the truth of this statement. If the practice of medicine consisted in the application of a few certain remedies, as is often erroneously supposed, a knowledge of it would be easily acquired; but all the initiated are aware, that its extent is boundless, and that no other science is so important, or so valuable to mankind.

It comprises almost all the branches of natural science, besides those which are strictly termed medical; in which we find a mass of information collected, which few can individually hope to possess. But a knowledge of the elementary principles of all the medical sciences, is properly expected and required by those, who are entrusted with the responsible authority of granting powers to practice medicine. They well know, that it is impossible in the very nature of things, for any individual to possess a thorough knowledge of medicine, and all the collateral sciences; but to become acquainted with their principles or elements, is within the power of every well educated and studious individual. Candidates for medical honours are, therefore, compelled to acquire an elementary knowledge of the facts on which the principles and practice of medicine are founded; so as to justify the constituted authorities, in placing their names among those, who may without injury to society, become responsible for the lives and happiness of their fellow creatures. Accordingly we find, that the course of medical education is nearly the same in all civilized countries; and is framed by those eminent cultivators of medicine, who are most competent to regulate it. They properly possess the power to enforce compliance with their regulations, and it is the interest of every student to comply with them.

The order in which medical studies are to be prosecuted, is so well known that it is unnecessary to describe it. I shall therefore confine myself to the consideration of the branch of science termed Principles and Practice of Medicine.

In accordance with the custom of medical authors and teachers, I shall commence my introductory remarks with a brief allusion to the origin of medicine, and the universal veneration of mankind for its cultivators.

The origin of medicine was, from time immemorial, attributed to the Deity, and by the heathens to their objects of worship. The antiquity of medicine is proved by reference to the sacred volume, in which we find many of its precepts inculcated, the natural history of animals and plants recorded, many diseases and their remedies described, and many hygeiologic precepts laid down for the preservation of health, and prevention of human infirmities.*

* Gen. xl. Exod. xxi. Lev. xii. Eccles. xlvii.

It is the universal opinion that medicine emanates from the Creator, and without his aid it cannot be practised with success. "Every cure is from God." "The most high has created medicines out of the earth, and a wise man will not abhor them." The healing art disunited from religion, would be impious or nothing. Man can do nothing good for himself, or his species, without the aid of his Creator. The most eminent physicans of all times entertained this pious sentiment.

The most renowned of the faculty have been distinguished for their piety; among whom we find Harvey, Winslow, Sydenham, Locke, Boerhaave, Arbuthnot, Haller, Hoffman, Sthal, Baglivi, Steno, Helmont, Riverius, De Hean, Vesalius, Ruysch, Lancisi, Gaubius, and in our own day, Gregory, Baillie, Bateman, Davy; and many other illustrious men now in existence. They studied the sacred volume, which to use the language of Cicero when speaking of the twelve tables, is "a little book that alone exceeds the libraries of all the philosophers in the weight of its authority, and in the extent of its utility." In it is to be learned the only complete history of the universe, the divine precepts of religion, which refer all honor and glory to the Author of all things, and good will to mankind. In it is found the golden maxim of all ethics, "do unto others as you would they should do unto you." This is the great and first principle of human conduct, it commands man to observe justice and benevolence towards his fellow man; duties which by their reciprocity lead to his own as well as the general good.

The cultivators of medicine have been frequently unjustly accused of favoring infidelity, and a contempt of religion. Of all the calumnies launched against medical practitioners, there is none so diffused, and so erroneous as that of irreligion. It is broadly asserted that medical men in general, are deists or athiests. This is a vulgar error. A medical practitioner cannot be an anatomist and an athiest, as nothing presents such strong proof of the existence of the Creator as the wonder of our organization and its functions. "The wonderful relation between the structure and functions of all parts of the human body, the disposition of the bones and muscles, the distribution of the arteries, the veins and their anastomoses; the functions of the brain, heart, lungs, &c., in fine, every thing in the study of anthropology attests a superior intelligence. The origion and ces-

sation of life manifest the peculiar power of the Deity. The reproduction of species, the endowment of life and of mind, can only be ascribed to the same Being. In a word, the anatomy of a hair is sufficient to overthrow all the reasonings of materialists, and of infidels.

On referring to the earliest history of medicine, either in the sacred or profane writings, we find, that the alleviation and cure of human infirmities, was universally ascribed to a supernatural power; and that many of the physicians of the early ages, were venerated, and even deified by the heathens.

The history of medicine may be traced as far back as the creation of the universe. It is recorded that the first of the human species, were soon after their creation, rendered liable to diseases, but previously informed of the sanative and noxious properties of all external objects. *The nativity of the first of our race, must have required human assistance, in seperating the new born from its connexion with the mother,* or with the placenta, or after-birth. Hence some medical historians contend, that either of the first parents of mankind must have acted as obstetrician, at a period so remote as the first year of the creation of the world. These authors also maintain, that Adam was the first obstetrician. But it is more certain, that he, and the mother of mankind, were previously rendered liable to diseases, and death, and that the healing art was nearly coeval with man; and must have occupied his attention in the first days of his existence.

The vicissitudes of season, the varieties of climate, the influence of the circumambient atmosphere, the action of surrounding bodies, and the construction of the human fabric, must have rendered diseases, nearly coetaneous with mankind. The presence of bodily infirmity produces pain, and impels man to seek immediate alleviation, and to employ means for that purpose, either by instinct, experiment, or spontaneous exertion. The many accidents and injuries to which he was exposed in the early and rude ages, must have frequently obliged him, to suppress hæmorrhage, to remove the deformity of dislocation, and to adjust the painful fracture. Thus necessity conceived the art of medicine, reason nourished it, long use promoted it, and experience at length completed it, and made it absolute.

The foundations of this art among mankind, were first laid by chance, instinct, and unforeseen events; these were improved by the success and recollection of former experiments; the results of observations, experiments, and remedies, were carefully recorded, and a comparison was instituted between events already observed, with those of daily occurrence. The sick were exposed in the streets and highways; and inquiries made of passengers if they knew any remedy. The names of diseases, their remedies and results, were handed down from father to son among the ancestral traditions; and were at length inscribed on the walls and paintings of the public temples. A system of medical instruction was formed from these sacred records, which all were obliged to follow in the cure of diseases; a law alone which was the cause of the extermination of thousands, until the healing art was practised by certain individuals, as a peculiar calling. Such was the manner of cultivating medicine in the early ages, even after the deluge, by the Egyptians, Babylonians, Grecians, Germans, Indians, Assyrians, Chaldeans, and Portuguese; and afterwards in the islands of Cnidos, Cos, and Epidaurus.

The history of ancient medicine is, like that of all the early transactions of mankind, a mixture of monsters, giants, demigods, and fables. It would be uninteresting to notice, the legends and dark archives of antiquity relative to the first epoch of the healing art, except by adverting to Ovid's allusion to Apollo, as the inventor of physic, in the following lines, which now grace the armorial bearings of our Society of Apothecaries:—

"Inventum medicina meum est, opiferque per orbem
Dicor; et herbarum subjecta potentia nobis."

All the ancient heathens agree in one point, that some Deity was its inventor, which is also confirmed by Hippocrates (Liber de Vet. Med.), and by Cicero, in Tusc. Lib. iii. "Deorum immortalium inventioni consecrata est ars medica."

The concurrent testimony of historians of all ages, proves it to be the noblest, and most useful of human pursuits; and hence the esteem and veneration, universally entertained for its cultivators by mankind.

The dignity of medicine arises from the nobleness of its subject and its end; its subject is the human body, which excels all other material bodies; its end is health, which is the greatest temporal blessing of man. The importance and dignity of medicine, were felt and acknowledged in all ages and countries, both civilized and

savage; because the severity of pain and dread of death, were almost coeval with the existence of the human race.

The heathens also highly esteemed the healing art. Democritus said it was the sister of philosophy; the latter removed affections of the mind, the former diseases of the body. Hippocrates recorded, that the ancient cultivators of medicine ascribed its origin to a divine source, in which he concurred, as also did Galen. This was likewise the belief of the primitive Christians: St. Austin observes, "Medicina non invenitur unde ad homines manare potuerit, nisi a Deo." (De Civ. Dei.) But the healing art was rendered pre-eminent by the divine Redeemer having practised it, while he avoided all other human pursuits.

The excellence and pre-eminence of the healing art, were also admitted by the Roman orators and moralists. Cicero said, "In nulla re homines propius ad Deos appropinquant, quam salutem hominibus dando." Seneca observed, "quædam pluris esse quam emuntur; emis a medico rem inestimabilem vitam ac valetudinem bonam. "A physician of genius," says Montfalcon, "is the most magnificent present, that nature can make the world."

Medicine was encouraged, cultivated, and practised by kings, princes, and pontiffs; the highest, wisest, and best of men. In proof of this position it may be stated, that Solomon, Saphoris, and Gyges, kings of Persia; Habidus, and Mithridates, kings of Pontus; Mesue, king of Damascus; Avicenna, prince of Cordova; Isaac, the adopted son of the king of Persia; Nicholas V. and John XXII., Roman pontiffs, illustrated medicine by their writings.

Homer records the great esteem entertained for Machaon and Podalirius, the sons of Esculapius, in the Grecian army; Virgil, that for Japis, physician to Æneas; and Silius Italicus, that for Synalaus, the physician to Hannibal.

All civilized nations conferred the highest privileges and honours, on the practitioners of medicine. They were exempt from the performance of all civic duties; they were supported by the state in many countries; and ample, nay, prodigal rewards were bestowed upon them, throughout the civilized world. The history of medicine affords abundant proof of this statement.

All wise and prudent emperors and kings, duly estimated the utility and excellence of the healing art, and were extremely desirous of having learned and experienced physicians, to preserve their own and their subjects' health; and hence the honours, immunities, and privileges, bestowed in every civilized nation upon the faculty. It is unnecessary to enumerate the vast number of temples dedicated to the early founders of physic, or refer to the rank so signally conferred on Hippocrates by the Athenians, or to the honours bestowed by all nations in succeeding ages on the profession. I may briefly mention, however, that the court physicians and surgeons of our own country have had titles and emoluments amply conferred upon them; and such is the custom of all nations in Europe.

Medical practitioners are those men to whom we confide our health, which is above all earthly concerns. To them are entrusted the existence of those that are most dear to us, and in their hands are placed the lives of our nearest connexions, and of the friends to whom we are most attached. All gradations of society are alike dependent on them, and must, sooner or later, require their assistance; for, from the earliest period of life to the last moment of existence, their skill may be exerted to preserve health, to arrest the progress of disease, or to smooth the approach of death.

It is to physicians that all classes commit their health, which is above all treasure, the father confides his child, the husband his wife, the monarch as well as the peasant; they preserve the feeble infant from all the dangers to which it is exposed on coming into the world; their cares protect infancy, childhood, adolescence, manhood, and old age.

At every period of life, man calls for the assistance of a physician, and he rarely implores in vain. The confidence placed in him is unbounded; health and life are committed to his care, and on him the comfort or misery of families frequently depends. Hence it is, that no class of men enjoys the respect of every rank of society to such an unlimited degree, as the practitioners of the healing art; and hence it is that they have ever acquired, the esteem and veneration of mankind.

That this confidence and esteem should be fairly merited, the father of medicine, and all his eminent successors, to the present period, required an oath of their disciples, the principal obligations of which were, the cultivation of every virtue that adorns the human character. A code of professional duties, or ethics, was

arranged, which all were obliged to obey, and which still governs those who have been properly educated.*

Every medical practitioner is morally bound to acquire the most perfect knowledge of the various forms of disease, and the best mode of treatment, according to the received opinions of his profession. Medicine is one and indivisible, and must be studied in all its parts. It is the most abstruse and comprehensive of the sciences, and the most important to mankind.

The objects which engage the study of medical practitioners, are, the properties of the sun, moon, and heavenly bodies, the laws of their uninterrupted revolutions, and various movements; their influences on climate. situation, and human health; the various productions of the earth and the waters, and the microcosm of the human body, with its wonderful organs, functions, immaterial principle, innumerable derangements, and remedies. But when he considers the boundless sources of his remedial measures, he must admit the correctness of the adage—

"Mille mali species, mille salutis erant."

The distribution of all bodies into three kingdoms, very much facilitates the study of nature, and more especially as the productions of each kingdom have been subdivided into classes, orders, genera, species, and varieties. "A medicine," says Galen, "is that which can alter our nature, and from a preternatural, reduce it to a natural condition." All medicines are derived from the ultimate elements of vegetables, animals, and minerals. Some are procured from the roots, woods, barks, leaves, flowers, seeds, fruits, gums, resins, and juices of vegetables; others from different parts of animals; more from earths, metals, and minerals; and all are subjected to various modes of preparation by the apothecary, such as oils, distilled waters, infusions, decoctions, extracts, mixtures, spirits, tinctures, wines, vinegars, syrups, confections, powders, pills, plasters, &c.

Medicines are therefore bounteously supplied from the three great kingdoms of nature—the vegetable, the mineral, and the animal. The science which treats of these kingdoms is natural history, which is subdivided into botany, mineralogy, and zoology.

Natural history, though a vast science, is but a division of natural philosophy, which includes the knowledge of all existent beings which are capable of affecting our senses, and embraces, 1. Physics, or the general laws which govern and maintain the order and harmony of all bodies collectively; 2. Chemistry, which demonstrates the elements or proximate principles of bodies, and their action on each other; 3. Anatomy and physiology, which explain the structure and functions of all living beings; and, 4. Astronomy, or the study of the immense bodies placed above the earth and the atmosphere. The materia medica is supplied from every range of the creation, and extends from matter to space.

It may be stated that the earth and its innumerable productions, those on its surface and in its substance, the ocean, the atmosphere, and the innumerable objects these contain, contribute largely to our hygienic and therapeutical agents, or to the materia medica. The medical faculty may therefore exclaim with the poet—

"Quæ regio in terris, nostri non plena laboris."

In observing the different phenomena of life, of hygienic and therapeutical agents, physicians are continually obliged to recognize the omnipotence, goodness, and other attributes of the Deity; they cannot consider their art a sovereign power, because they too often find it to fail. It is to the Divinity they must attribute their success or failure—such is true medical wisdom. No one knows so well as the medical practitioner, the miseries of man, his infirmities, and the dangers which every moment threaten his life. Who so well knows the suddenness of death in the most robust constitutions? In truth, the whole history of man and of the healing art, recalls to him the idea of a Supreme Being. He discovers in religion the powers opposed to all the annoyances inseparable from his ministry, and the real consolations against the ingratitude of mankind. It enables him to bear all the weaknesses and follies of the sick, to perform the benificent powers of his art in the most disgusting instances; and to be the instrument in the hands of the Author of All, for affording relief, and diminishing the sufferings of humanity. Hoffman was right when he said, a physician ought to be a Christian—"*Medicus sit Christianus.*"

This great principle has led all the universities, medical schools, and colleges, to inculcate and enforce the cultivation of

* I have given a full account of Ancient and Modern Medical Ethics in my Manual of Medical Jurisprudence and State Medicine, 2nd Edit. 1836.

religion. It has been wisely stated, as a medical axiom, such is the connexion between the Deity, religion, and a physician, that without God and religion, no medical practitioner can be successful*. This reflection of Broesiches is a great moral truth. A religious physician or surgeon will not arrogate to himself an absolute empire over the lives and health of men; he will not pretend to govern the progress of diseases; he will not consider himself the God of nature; but he will refer his ministry, as well as all things, to the Supreme Being. "It is from Him he derives his light; it is on Him he calls for succour when in need"

The practice of medicine requires the exercise of all the virtues. Whoever fulfils the whole of the duties it imposes upon him, obeys the most rigid moral laws. To cultivate religion, to love his country, and to be a truly good man, form the real character of the medical practitioner. It may be urged that there are some exceptions; but it may be said, with truth, they are few in number.

It must be admitted by every well-informed individual, that there are intimate relations between religion, morals, philosophy, and medicine. It was well observed by the ancients, that there is a close connexion between certain physical states, certain characters of the intellectual faculties, and certain passions; that is to say, according to the habit of the body, the proportion of the members, the colour of the skin, the disposition of blood vessels, lymphatics, nerves, &c. will thought and the train of ideas correspond. Many of the ancient sages found in the organization of man, compared with the functions of life, the solution of the most important moral phenomena. It is scarcely necessary to remark, that many physicians have written esteemed works on philosophy, and on the human mind, and it is almost superfluous to mention Locke, Dugald Stewart, Thomas Brown, Condillac, Cabanis, &c.

Psychology, medicine, and philosophy are inseparably connected, and must be studied by medical practitioners. Who does not know the influence of mind on body, and *vice versâ?* Psychology and physiology inform us of the formation of ideas, the rules which ought to regulate life, the course that leads to happiness, the influence of the different climates on the physical state of man, and on the institutions of society, that of regimen upon the intellectual faculties and passions, and that of diseases on the operations of the judgment. These sciences embrace the operations which constitute the functions of intelligence, determine the power of volition, comprise the different characters of the passions, and supply the basis of the moral faculties. The faculties of the mind are intimately connected with the organization of man, and nothing can separate the study of his physical and moral states*.

There is none of the learned professions which requires such varied and extensive information as medicine. It extends from matter to space, it includes the natural history of the animal, vegetable, and mineral kingdoms, and of the air, the earth, and the waters. A greater extent of learning and of the sciences is necessary for a medical practitioner than for any other professional character. He is expected by society to answer all the innumerable inquiries concerning health. Dr. John Gregory well observes, in his Duties and Qualifications of a Physician, "to excel in this profession requires a greater compass of learning than is necessary in any other." This opinion is also borne out by the most exalted testimony. Justice Blackstone gave physicians pre-eminence for "general and extensive knowledge." Dr. Johnson was scarcely less favourable in his estimation. "Whether," he observes "what Temple says be true, that physicians have had more learning than any other faculties, I will not stay to enquire, but I believe every man has found in physicians great liberality and dignity of sentiment, very prompt effusion of beneficence and willingness to exert a lucrative art where there was no hope of lucre†." The late Dr. Parr, the justly celebrated philologist, remarked, "while I allow that peculiar and important advantages arise from the appropriate studies of the three liberal professions, I must confess, that in erudition and science, and in habits of deep

* Tanta est inter Deum, religionem et medicum connexio, ut sine Deo et religione nullus exactus medicus esse queat."

* The best account of the relations between the organic, moral, intellectual, and physical states of man, and in connexion with external objects, will be found in the admirable work of Mr. Coombe, entitled "The Constitution of Man in Relation to External Objects." A book that ought to be in the possession of every one.

† Lives of the Poets, Garth.

and comprehensive thinking, the pre-eminence in some degree must be assigned to physicians*." Rousseau spoke as follows of the faculty:—"Il n'y a pas d'etat qui exige plus d'etudes que leur: par tous les pays ces sont les gens les plus veritablement utiles et savans†."

Hence all public institutions which regulate education for admission into the profession of medicine, require that those intended for the study of the healing art should receive a good general and classical education. The Professors of all our Universities and Medical Schools, the Examiners of all our Colleges and Apothecaries' Societies, delivered their evidence in proof of the indispensability of this point, before Mr. Warburton's Parliamentary Committee on Medical Education and Practice, in the summer of 1834‡. All the witnesses proved that a knowledge of the Greek, Latin, English, French, German, and Italian languages, of mathematics, logic, moral philosophy, natural history and philosophy; in fine, that the course of general education always required by the Universities for degrees in arts, is indispensably necessary for those intended for admission into the medical profession. This extensive course of preliminary instruction has long been required by the Universities of all candidates for admission into the learned professions; and is now in some degree exacted by some of our Colleges of Surgeons and Societies of Apothecaries, from those intended for the practice of medicine.

No class of men stand in so much need of extensive erudition and knowledge. They may have to attend all ranks of society, from the lowest to the highest, and ought to be exceedingly well informed in general as well as in medical literature. A greater character for learning and science cannot exist, than that which constitutes an accomplished physician; the most extensive study, and the most comprehensive mind are therefore requisite. The youth intended for the study of medicine, should have all his senses acute, and in the utmost degree of perfection; because it is from the perceptibility of the senses alone that the human mind is stored with all those sublime ideas which shine so conspicuously in the future life of a medical practitioner. When the senses are obtuse, dulness is the consequence; and a dull student never made a brilliant physician. The medical student should therefore have the clearest powers of perception, so as to receive accurate impressions, and possess a tenacity in their retention. He ought also to have a good memory and great reflection. The intellectual faculties should be copiously enriched by indefatigable industry and unceasing study, with the most extensive ideas of sensation and reflection, with memory, invention, and genius, so as to be capable of arranging a variety of ideas in strict logical order. When all demonstrative facts relating to our art are acquired, reflection, acute reasoning, and profound judgment will decide the manner in which they are to be applied in the treatment of diseases. What a vast field of knowledge is comprehended in the medical sciences! How many days and years of labour and industry are required! What sedulous diligence is absolutely necessary! He must, therefore, pursue with an ambitious zeal the various branches of the medical and collateral sciences, he should study all, as all united, form with experience the greatest medical characters. We may however prefer and practice any one department of medicine which is most suited to our taste or inclination; but we should study and know the whole, because disorder or disease of the smallest imaginable part of the surface of the body, even the wound of the finest cambric needle, may derange the whole economy and destroy life.

The truth of this position cannot be questioned, and it is for this reason that all the universities of Continental Europe compel medical candidates to become doctors in medicine and surgery, including obstetricy. One practitioner may prefer surgery, another obstetricy, a third aural, a fourth ophthalmic, a fifth dental surgery; others devote themselves to diseases of the brain and mind, some to maladies of the chest, more to those of the heart, many to disorders of the digestive system, stomach, intestines, liver, &c., more to genito-urinary diseases, others to local affections, lithotrity, gout, &c.; but every physician and surgeon should be conversant with the nature and treatment of every species of human disease. It is utterly impossible to separate diseases into medical, surgical and obstetrical, because any one disease, no matter what may be its situation, may, can, and ge-

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* Remarks on the statement of Dr. Charles Coombe, pp. 82, 83.

† Letters.

‡ Reports of Parliamentary Committee on Medical Education, 1835.

nerally does derange and disorder all the organs and functions in the human body. Away, then, with the absurd and untenable distinctions of medicine, surgery, and obstetricy; the profession of medicine is one, and indivisible as a science. It is for this reason that the public in most countries expect medical practitioners to be well acquainted with all branches of their profession; and that the laws of Continental Europe exact this qualification from the members of the faculty. In this kingdom, the Apothecaries' Company has in some measure attempted to follow the example, and exceeded the Colleges of Physicians and Surgeons in benefiting the public.

But in all civilized countries there is a division of medicine: there are consulting physicians, surgeons, and obstetricians; and this regulation cannot be dispensed with or destroyed. Indeed it has originated in the earliest ages, has continued to the present time, and most probably will be required for all future ages. Nevertheless, every medical practitioner ought to be competent in emergencies to act as physician, surgeon, obstetrician, apothecary, and even perform the duties of the ordinary attendants on the sick. It would be absurd, and indeed foolish, to expect that the largest portion of the community could employ or remunerate, in each family, a physician, surgeon, obstetrician, and apothecary. This may be done in the higher ranks of society, but not by the majority of the public in any country. Hence the necessity of the general medical practitioner, who performs all medical offices in ordinary cases, and only requires the aid of the different classes of his brethren already mentioned in peculiar and desperate diseases. This arrangement is, however, objectionable, for the reasons already assigned, as no member of the faculty ever was, or ever can, from the vast extent of the medical sciences, be perfectly acquainted with all the branches of the healing art. No well educated and legally qualified physician, surgeon, obstetrician, or apothecary ever pretended to possess such an amount of knowledge. Were any member of the faculty to do so, the world would despise and deride his vain and preposterous pretensions. This position will be rendered apparent, on adverting to the course of medical education. There is a great variety of means to be employed to obtain a proper medical education. It is not only necessary to comply with the regulations of universities, medical schools, and corporations, but also to resort to many other sources of knowledge.

It is highly advantageous to the cultivator of the healing art to visit different universities and schools, and to learn the principles and practice of medicine under the most celebrated professors. It is for this reason that many students, who commence their studies in London, afterwards repair to Edinburgh, Dublin, Paris, Vienna, Berlin, Pavia, &c. and *vice versâ*. Thus when a professor of superior merit is to be found in any part of the world, his fame has great influence on strangers, and remote countries send him disciples and admirers. Few are ignorant of the great afflux of students from many nations to the lectures of Boerhaave, Morgagni, Monro, Hunter, Frank, Cullen, Scarpa, Abernethy, Cooper, &c. &c. It has also been a great advantage to have studied under such masters, and even in our time under an Abernethy, a Cooper, a Dupuytren, a Bell, a Colles, &c. Lucrative and important appointments have been given to the pupils of these and other eminent individuals. There is, however, a more independent spirit abroad in these days, and few are ready to swear by the word of a master. Moreover, the opinions of all eminent practitioners are generally published, and may be procured with the utmost facility. This incalculable improvement was effected by the medical periodical press, and is now general throughout the world.

The medical press publishes the lectures and opinions of the most celebrated and eminent practitioners of different countries, and presents them on such low terms, that every student and practitioner may possess them. It saves a vast expense which should otherwise be incurred in the purchase of the numerous original works which are daily issuing from the press, and affords the greatest facility of learning the opinions of celebrated physicians and surgeons of all countries.

The medical periodicals also form a complete encyclopædia of the healing art, and prevent the necessity of procuring many expensive productions. It is for this reason that every scientific practitioner, and every industrious medical student possess them.

A good library is, however, indispensable to medical practitioners. It ought to contain the best systematic, monographic, and elementary works of this and foreign countries.

Few students are seldom so affluent as to possess a sufficient number of standard

systematic, monographic, or elementary works; but all may procure a collection of manuals in our own and other languages, which will be sufficient for the first year of their studies. Such works are not sufficient after the period just mentioned; and then monographic and systematic treatises are indispensable. It is important to observe that students should always peruse the last editions of works; and professors recommend such productions to each of their respective classes. A well selected museum, with casts, drawings, &c., is also a source of much instruction and information. It is likewise essential to associate with literary and scientific individuals, and to join the medical societies and academies. Such are a few of the requisites for obtaining a proper knowledge of the principles and practice of medicine.

In addition to these means, the most indefatigable industry in the lecture-rooms, hospitals, dispensaries, and infirmaries for diseases of particular organs, as the eye, ear, rectum, uterus, skin, and for parturient women, is indispensably necessary. The proper time for attending such institutions is the second or third year of study, when a knowledge of the principles of medicine has been acquired.

The last part of medical education is private instruction, which enables the student to acquire a facility and correctness in answering questions, and greatly assists him when preparing for examination. But when he has been attentive and industrious, he has nothing to fear. On appearing before the examiners for a degree, diploma, or licence, the student is always to remember that his judges are sworn to act impartially, and that they can entertain no personal feeling against him. They well know the anxieties of students and their friends, and are most reluctant to refuse any individual admission into the profession, unless on the grounds of incompetency. They never remit an applicant to his studies on any other grounds. It was proved by the various medical examiners of this kingdom before parliament in 1834, that they always rejected candidates with the greatest reluctance; and admitted many whom they ought to have refused. (See Parliamentary Evidence on Medical Education 1835.)

When the student is admitted into the profession, and his name enrolled with those of its brightest ornaments, he is required to swear to maintain the dignity of his calling, and to act honourably towards his brethren and the public. He pledges himself to uphold and maintain the ethics or etiquette of the profession, so that the noble science which he professes shall not be debased or degraded by his conduct. It must be evident that every member ought to be equally responsible, for were there to be one exception there must be many. I can confidently say from experience, the strict observance of medical ethics is indispensable to success in practice, and that no one who had violated his duty, ever has, or ever can succeed in his profession. I have given a full account of medical ethics in another work*, and shall now conclude this subject by depicting the true character of a legally qualified and respectable medical practitioner, and I adopt the description of Dr. Goodman, an American professor.

"The character of a truly good medical practitioner is one of surpassing excellence. He is the friend of the wretched and woeworn, the cheerer of the despondent, the solacer of the broken hearted. His soul is the empire of benevolence, his actions the result of a principled charity, and unaffected good will. He is a blessing conferred on society in which he lives, and an honour to the human race. Wherever the afflicted dwell, wherever the voice of suffering is heard, he is to be found. The diseased find cheering and consolation from his presence, and the sounds of sorrow are stifled. Even when hopes of life cannot be given, he calms the tumultuous grief of relations by recalling their thoughts to that better world, where sickness and sorrow can be no more, 'where the wicked cease from troubling, and the weary are at rest.'

"Such are the common offices and frequent exercises, in which the medical practitioner is engaged. His character, even under ordinary circumstances, may be contemplated with gratifying emotions. But there are conditions in which he is presented in a more sublime aspect.

"It is when the lurid breath of pestilence, scatters desolation and dismay, throughout the land, and death tramples with indiscriminate fury over the people. When the ties of relationship and affection are sundered by the violence of fear, and utter selfishness seizes on the hearts of men; *then* the good physician unmoved by such examples, untouched by

* Manual of Medical Jurisprudence and State Medicine.

terror, regardless of himself, is seen actively discharging every duty. Then he becomes the father, the brother, and the friend of the destitute, his stedfast attention smoothes the pillow of the dying, he inspires the desolate with hope, and like a beneficent angel, wherever he goes, is the dispenser of good. Who can estimate the feelings, or measure the fame of such a man? Who would not imimate his example, for such a reward? What is there in death's most frightful forms, that could withhold us from attempting to deserve it. It is a glorious privilege which our profession confers, of inscribing our memories not on perishable marble, but in the living affections of our fellow men, to be cherished as long as our race shall endure."

Such was the eloquent and true description of a respectable practitioner, by one whose loss must be deplored. But let us advert to the more common relations of our profession.

The following graphic and elegant description of the professional conduct of medical practitioners, is so accurate and so just, that I quote it with much pleasure. The author defended the study of anatomy before the passing of Mr. Warburton's act which legalized it.

"Nevertheless, anatomical pursuits are neither criminal in themselves, nor yet fraught with dishonour or disrespect to the dead; they outrage no feelings but such as are of a superstitious nature; neither do they in any way deteriorate or brutalize the character of those who pursue them. Insinuations of the latter kind are, indeed, frequently thrown out, but we repel them with meet and honest indignation. We appeal to observation for the truth of our statement, when we assert, that society does not present another class of individuals more numerous and respectable than that of the medical profession; and one, at the same time, against the general moral conduct of which so little reproach can be made. There is none, too, possessed of more varied and valuable information. In these respects physic has no occasion to shrink even from a comparison with divinity. With temptations infinitely stronger and more diversified, practitioners in medicine do in no wise cede to the clergy, taken generally, in the morality of their conduct. It ought moreover to be borne in mind, that the very vocation of the latter, by abstracting them from temptation, diminishes the merit attached to the rectitude of their walk. At the same time we need not hesitate to affirm that more benevolent, more truly kind and charitable individuals, than those which have adorned the profession of physic can no where be found. No description of men, whatever their calling or station in life, render such valuable services to the poor and needy sick; none expose themselves to dangers equally numerous and great, without the remotest prospects of pecuniary remuneration. They work silently, yet not the less effectually. They make use of no ostentatious preconization of their good deeds, which are of unsolicited and spontaneous origin; and whilst others are idly preaching the duty of charity, they exemplify it in their daily converse with man. No one is better acquainted with the distresses of poverty and sickness than the practitioner; and no one, therefore, can more fully and deeply sympathize with the afflicted. What a bright galaxy of medical philanthropists does history exhibit to us! Of men who have conferred lasting and invaluable blessings on society; who have laboured through evil and through good report, for the benefit of their fellow creatures! And do they not still labour in the same cause? Do they not pursue the same undeviating path of benevolence; gratuitously devoting their time and talents to the indigent sick? We will say nothing of what is privately wrought in this respect; let our public hospitals, our dispensaries, and asylums, be consulted; let them speak. There are very few such institutions, in which those who have the care of the soul are not adequately remunerated for their trouble; whilst universally, those who cure the body bestow their time and ability gratuitously. And yet, time is infinitely more precious to the latter, than to the former.

"Again, no body of men in the community can boast of brighter ornaments to science than are to be found amongst the members of the profession of physic. Where shall we find more truly liberal and enlightened philosophers? Individuals, that have more effectually contributed to dissipate error and superstition, or more zealously promoted the general good of mankind? Where, in fine, shall we meet with men who have united higher cultivation of mind with a more truly virtuous nobility of character?

"We repeat, then, neither in mental nor moral attributes does the profession of physic yield to that of theology. Let

no one imagine we are instituting an invidious comparison, with the intention of exalting the merits of one body in the community, by depreciating those of another. We have no aim but that of evincing the general worth, industry, and acquirements of medical practitioners. We wish to show that the study of anatomy does not exert any baneful influence on their characters; that it does not deprive them of the distinguishing sensibilities of humanity, and thus render them callous to the sufferings of their fellow men. No! they pursue an honourable and dignified vocation, and are urged on in their career by the noble ambition of achieving the utmost possible good. It would be difficult, indeed, to point out in society, individuals of a more laborious, persevering, and indefatigable character. At all hours, at the table of repast, on the couch of repose, amid the inclemency of weather, the harass of an anxious mind, and the oppression of bodily fatigue, they must be ready to obey each capricious call! And yet how ill-treated and ill-requited! Patients rigorously exact an assiduous attention; whilst with all *latitude* which may suit their *fancies*, they will *follow* the advice of a medical attendant, yet immediately suspect the extent of his skill, should the amelioration *demanded* not ensue. But this is not all; they even seek at the hands of the law to obtain compensation for any supposed deficiency of skill, to the attainment of which, nevertheless, both themselves and the law are equally opposed!"*

They cease to suit their own convenience, and to attend to their private affairs, as they are always ready to wait on suffering humanity, they allow nothing whatever to prevent them from visiting the sick, they are always ready, they bear with the injustice, the caprices and ingratitude of men, they expose their lives in the most dangerous circumstances, when pestilence devastates the earth, in all times, in all places they possess courage, exemplary patience, and an entire abnegation of self, such are the duties of medical practitioners. They are however amply rewarded for all annoyances and ill-treatment. They have numberless opportunities of giving that relief to distress, which is not to be purchased with the wealth of India. This to a benevolent mind is one of the greatest pleasures.

"Is there any thing in the world more estimable," asks Voltaire, "than a physician, who, having studied nature in his youth, knows the relations of the human body, the diseases that torment it, the remedies that may assuage it, exercises his art in defiance of it, takes equal care of the rich and poor, who does not receive remuneration but with regret, and employs it to the succour of the indigent. Men," continues he, "who are occupied in affording health to other men exercise the only principles of beneficence, are above all the great ones of the earth, they partake of the Divinity."

They are now duly appreciated by kings, nobles, poets, literary and philosophical characters. All the virtues are displayed in the exercise of the functions of a physician, his ministry commands the respect of men and the admiration of sages.

The limits by which I am confined in this work remind me that I must conclude my remarks on medical education. Were I at liberty, I should expatiate on many points to which I have but very briefly alluded. I have however fully dwelt upon them elsewhere.* I shall now conclude with a few hints to medical students who visit London, which apply to medical students in general.

There are few medical students who visit London to acquire professional information, who are not recommended, either by their friends or acquaintances, to enter at some particular school, and for this reason it is only necessary to offer hints to those, who come to the metropolis as perfect strangers, and have no friendly or competent advisers. To these then we shall give some useful information.

In the first place, all the *perfect* schools of medicine, are recognised by the Colleges of Surgeons, Societies of Apothecaries, and by the Army, Navy, and East India Medical Boards, and all are precisely on the same footing in the estimation of the Examining Boards, so that the certificates for attendance of all are equally received.

Secondly, the terms for attendance on lectures and Hospital practice, are widely different, as will appear immediately.

Thirdly, the Hospital Medical Schools are much more expensive (though the course of education is precisely the same in these, as in the rival schools unconnected with hospitals), than the latter

* Dr. Corden Thompson's Letter on the Necessity of Anatomical Pursuits, 1830.

* Manual of Medical Jurisprudence and State Medicine, 1836.

the difference of amount being for medical education, and medical and surgical practice from 20*l.* to 60*l.*

Fourthly, the student should enter perpetual to some school, by which he will save a vast deal of time, as the lectures are so arranged in each, as not to interfere with each other, and to economise the time of the student. There is a great deal of time lost by attending certain lectures in different schools, more especially when distant from each other, and from the hospital, and recognised dispensaries. It is also to be stated, that a student saves his money by entering perpetual to one school; and this enables him to attend certain lectures elsewhere if he please, during the second or third year of his studies.

Fifthly, the student should visit all the lecture rooms during the first twenty-one days of October, as all are open to him free of expense; hear the different teachers, enquire into their characters, and determine those whose mode of lecturing he thinks likely to convey to him the most instruction. He can learn during this period the popularity of each lecturer, the estimation in which he is held as an original author, as a practitioner, and for his punctuality in the discharge of his duty in the lecture-room, and in the hospital or dispensary.

Sixthly, the respective professors will afford the student every information, as to the time of registering admission tickets at the Royal College of Surgeons and Society of Apothecaries, as to the effect of the different codes of Regulations, as to the best books to be procured, and to the mode of study which should be followed.

Lastly, the student should be most attentive to his lectures and studies; because the time prescribed by the constituted authorities is much too short for acquiring a good professional education; and therefore, no part of it ought to be wasted or idled away in visiting places of amusement, and the unnumbered sources of enticement afforded by the metropolis. The medical student should never miss a lecture, or the hospital, or dispensary, unless on account of indisposition, or some important circumstance; for he will find at the end of his studies, even when prosecuted with exemplary diligence, that he will be seldom prepared or qualified to appear before the Examining Boards for their diplomas. Impressed with this conviction, he must perceive that in wasting his time, he prolongs his stay in the metropolis, incurs an additional expense, dissappoints the expectation of his relations and friends, depreciates his own character, and may almost ruin it, by rejection at his examinations. Notwithstanding all the senseless clamour raised against the Royal College of Surgeons and Society of Apothecaries, for requiring so much time to be occupied in acquiring medical instruction, we speak advisedly, and after many years' experience in teaching, when we state that there is not one student in one hundred, who ventures to appear before either Court of Examiners, at the expiration of its prescribed terms. This clearly shows the absolute necessity of industry and zeal on the part of the student. We have known many who spent five, others ten years, and some even a longer time, before they appeared at the Examining Boards; but they were idle, inattentive, or dissipated. We indite these remarks, as the sincere friends of medical students in general; and as acutely sensitive for the success of those with whom we shall be henceforth connected. We say to all "persevere and you shall succeed," *labor omnia vincit.*

DIAGNOSIS AFFORDED BY AUSCULTATION IN DISEASES OF THE HEART AND AORTA; AND ALSO IN DISEASES OF THE ABDOMEN.

The preceding account of the physiology and pathology of the heart, enables us to form an exact opinion of the various maladies to which this important organ is subject. There is now as much certainty in diagnosticating diseases of the heart and its appendages, as those of the lungs or any other organ in the body.

The signs of diseases of the centre of the circulation are now determined, and as intelligible as those of fever or inflammation, and when we discover them we can declare the nature of the disease during the life of the patient.

Thus, then, instead of following the disease step by step, and describing its successive signs, the following is the problem we have to resolve. An abnormal bruit or noise having been heard, to determine both by what it has particular in itself, and by the other circumstances which accompany it, to what lesion of the heart it belongs: whether it is the effect of contraction of the orifices of the heart, or of some disease of the valves, or of dilatation of the orifices, or of reflux of the blood from the ventricles into the

auricles, or finally, of any lesion which I have described among the causes of the different bruits de soufflet. This question is not without difficulty, and most frequently, in order to solve it, we are obliged to proceed by way of exclusion. M. Raciborski had a young woman under his care, aged twenty years, presenting an etiolated or blanched appearance, and the waxen colour common to those affected with chlorosis. She had frequent palpitations of the heart, and a sensation of suffocation, and for some time previously œdema of the inferior extremities towards evening. The examination of the heart afforded a greater dulness of sound than in the normal state, and the bruit de souffle during the ventricular contractions. To what disease was this train of symptoms to be ascribed? Was it to chlorosis, or to an organic disease of the orifices of the heart?

The ordinary physician of the patient entertained the latter opinion, which M. Raciborski thought at first to have been correct. But M. Bouillaud examined the patient afterwards, and declared that her disease was chlorosis.

In this case it was true that the symptoms might have been caused by lesions of the valves or orifices of the heart; but the antecedents, the age and constitution of the patient, opposed this conclusion.

On the other side, it is probable that in chlorosis, the heart partakes of the same morbid state as the other muscles, that it becomes attennuated, and readily yields to the efforts of the blood tending to dilate it. The auriculo-ventricular orifices will participate in this dilatation, and the blood flowing back on account of this disposition from the ventricles into the auricles, may very easily cause the bruit de souffle.

The œdema of the lower limbs, is a characteristic sign of obstruction to the circulation of the blood, but in those affected with chlorosis, whose blood contains much serosity, and in whom there is an exudation of this serosity through the parietes of the vessels under different forms (œdema of all the tissues, leucorrhœa), ought we to be astonished, that this serosity is sometimes more perceptible in the lowest parts, in which it is collected by its weight? Moreover, the patient to whose case I have alluded, never felt any pains in the precordial region, the pulsations were very superficial, the anormal noises were most distinctly heard at the base of the heart, so that there was no ground for supposing the existence of pericarditis, either accompanied by effusion or false membranes.

The constitution of the patient showed that the blood was poor in fibrine, so that we could not believe that any clots were present in the heart, an opinion which the progress of the disease completely refuted. Thus it was on the ground of exclusion that the diagnosis was formed, and that the disease was decided to be chlorosis. Tonics were consequently prescribed, and in a month the bruit de souffle scarcely existed.

Chlorotic girls are often affected with disorders of action of the heart, and frequently with cough and copious expectoration, which is often mistaken for pulmonary consumption; and this last condition is easily explained by the obstruction given to the circulation of the blood by the interrupted cardiac movements, and more especially when there is chronic bronchitis or pneumonia.

When the patient presents a constant bruit de souffle in the prime of life, if he had previously articular rheumatism, pleurisy, or felt pains in the precordial region, if he experiences a considerable sense of suffocation, if the legs are swollen, &c. we shall have almost certain signs of some lesion of the cardiac valves, with contraction of the orifices. They will be still more certain, if instead of the bruit de soufflet, we hear the bruit de râpe.

In fine, we recognize hypertrophy with dilatation of the ventricles, unaccompanied by any lesion of the valves, when in addition to strong pulsations, a more extensive dulness both of the sound, and noises of the valves, we have not dropsical symptoms, nor considerable dyspnœa, and if the countenance is rather red than livid.

The organic diseases of the heart often occasion, consecutively, a collection of serosity in the pulmonary vesicles (œdema of the lung), effusions in the different cavities, swelling of the liver, &c. I have already described the means of distinguishing the two last complications in separate sections of this article, as I shall the special account of the diseases of the heart and large vessels.

The fluid which occasions œdema of the lungs will be displaced during each inspiration, and will give rise to the subcrepitant râle.

Aneurism of Aorta.

There was great uncertainty in the diagnosis of aneurisms of the aorta until the time of Corvisart. Though this phy-

sician had made useful researches on the subject, yet he declares that the diagnosis of aneurisms presents great obscurity, when the tumour is not to be detected externally, and that it is not evident except when it projects. Both these assertions are false, for sometimes a foreign tumour may raise the ribs, as Laennec had observed, and propagate the pulsations of the subjacent aorta.

The majority of the signs mentioned by Corvisart as the most proper to reveal the presence of aneurism of the aorta, such as whistling of the voice, the dulness of sound on percussion in the upper and middle parts of the sternum, the smallness and irregularity of the pulse, and its inequality in the two arms, may be caused by different tumours, which compress the bronchi and the arteries.

Laennec declares that the diagnosis of aneurism of the aorta is frequently very difficult; he, however, sometimes detected its presence by means of the simple pulsations heard along the aorta.

The more recent observations of M. Bouillaud have added still greater importance to this sign, which he regards as a certain characteristic of aneurism. According to this accurate observer, "when the aneurism occupies the infra-sternal aorta, the pulsations are heard under the sternum and under the cartilages of the ribs, over a greater or less extent, according to the size of the tumour. The simple pulsation will become more evident, in proportion as the tumour is more voluminous, and is more in relation with the vibrating parts.

"Aneurisms of the descending pectoral aorta, and especially those which cause the absorption of the vertebral column, will manifest their existence by simple pulsations, corresponding to the corroded vertebræ, a sign so much the more certain, as, according to the observation of Laennec, the double contractions of the heart are rarely heard in the back."

It is true that the examiner may frequently be led to mistake the pulsations heard above the sternum for the resonance of the first noise of the heart; but this pulsation differs from that of the heart by its greater intensity. It is sometimes so loud as to pain the ear, as M. Bouillaud has observed.

We shall distinguish the pulsations of aneurism of the abdominal aorta from those which result from the inflammation and spasms of this vessel, by the extent of the impulse, and by the force of the noise, which is much louder in the former than in the latter case.

Percussion, giving a dull sound to a considerable extent in the region, corresponding to the simple pulsations, will confirm the diagnosis made by means of auscultation, whilst, alone, it will never lead to a certain result.

I should infringe on the special consideration of diseases of the heart, were I to follow up the present general remarks on their diagnosis; but enough has been mentioned to prove the facility with which this numerous class of maladies may be detected; and ample evidence has been given already of their curability, if discovered in their incipient stages.

This part of pathology is as yet but partially studied, and many entertain doubts as to its correctness; but such practitioners are unacquainted with auscultation, and they unfortunately constitute a preponderating majority. In a few years from this time, diseases of the heart will be as well understood as any other class of maladies.

APPLICATION OF AUSCULTATION AND PERCUSSION TO THE DIAGNOSIS OF THE DISEASES OT THE ABDOMEN.

Diseases of the Liver. Abdomenoscopy.

The mode of examining the liver was indicated in the description of the thorax.

This organ presents, according to M. Piorry, two inches and a half or three inches in height towards the part nearest to the sternum, four inches more outwardly, and four or five inches in the lateral region. Its transverse diameter is ten or twelve inches in length.

The knowledge of these limits, and of the means of determining them, renders the appreciation of the different morbid conditions of this organ of easy comprehension, and is of great importance.

Thus, when, in certain cases of acute hepatitis or congestion, whether active or passive, the liver augments considerably in size, we are able to determine all the diameters by means of mediate percussion, and thus follow day by day the diminution of volume, which sometimes arrives very rapidly after depletion. At other times the hypertrophy is only partial, and occupies the left lobe of the liver, which in that case frequently extends as far as the spleen.

There are many physicians who, finding the epigastrium painful, would attribute this state to the existence of gas-

tritis. In similar cases, mediate percussion will show us the dulness of prolongation of the left lobe of the liver superficially, and the tympanitic sound of the stomach more profoundly.

In other cases, the intestines push the liver upwards, so that the respiration becomes disturbed. When the physician is not very familiar with percussion, he will frequently refer dyspnœa in such cases to disease in the lungs or pleuræ; whereas percussion will point out the total displacement of the liver, passing as much above its upper limit as it is removed below from its under one, and will find the tympanitic sound of the intestines above the border of the false ribs, over an extent much greater than in the normal condition.

At other times it is only the superior border of the liver which is elevated, without the other parts of this organ being displaced. This state can only be verified by percussion.

The presence of an effusion on the right side does not prevent the examination of the superior border of the liver posteriorly. In fact, by making the patient lie on the abdomen, the liquid will descend by its fluidity, and the liver alone will present itself to the examiner. It would be only in cases of very considerable effusion, in which the fluid could no longer be displaced, that percussion would be of little utility. If the liver passes the false ribs, it is equally easy to determine its prolongation downwards, and to distinguish it from other tumours in most cases.

The complication of ascites does not prevent us from recognising the liver below the border of the false ribs. The dulness and resistance of this organ are always more marked than those of effusion. When the patient lies on the back it will be very requisite to depress the abdominal parietes with considerable force, so as to place them in contact with the liver; or the patient may turn alternately on the left and right side. It is principally when the effusion is considerable that we should proceed in this manner. In fact, the liver, on account of its weight, will better apply itself to the abdominal parietes, when the patient lies on the right side than in any other position.

It may happen in these cases, that a knuckle or fold of intestine may interpose between the liver and abdominal parietes; then, before pronouncing upon the state of the latter, and when this is suspected to be the case, it will be necessary to repeat the percussion, and to depress the plessimêtre with considerable force. In this manner, the intestinal fold is reduced as it were to a membrane applied to the liver, becomes obliterated, and it is easy to determine whether the liver passes below the borders of the false ribs.

Percussion does not afford us very precise information as to the nature of the different tumours which may be situated in the liver. But if these tumours are superficial, the elasticity and feeble resistance to the fingers, will enable us to distinguish abscesses from scirrhous masses characterised by hardness and considerable resistance. We may sometimes distinguish hydatid tumours by the vibratory sensation felt by the fingers.

Distention of the Gall Bladder.

The gall bladder in the normal condition scarcely passes beyond the inferior border of the liver, so that it is impossible to recognise its presence by percussion; but this is not the case when it is distended.

When the gall bladder is distended, it is to be explored as follows: we percuss transversely the space immediately below the inferior edge of the liver, where in the normal state, we find, without interruption, the tympanitic sound of the intestines. When the gall bladder is distended, we perceive a slight dulness in the region of this organ, without resistance to the fingers, and according to M. Piorry, we discover the *humoric* bruit. These signs uninterruptedly succeed the dulness of the liver superiorly, and give place to the tympanitic sound of the intestines in all the other directions. But these signs might also be produced by the presence of fluids and gas in a fold of the intestine. But if these characters persist in the same point when the patient lies on the side, the presumption that they are owing to the presence of the gall bladder will be changed into certainty, for otherwise the fluid would be displaced by the change of position.

Engorgement and Hypertrophy of the Spleen.

Engorgement of the spleen is of more frequent occurrence than its real hypertrophy, and is a common result of intermittent fevers. Without prejudging this question, which is foreign to our subject, we cannot deny that the swelling of the spleen appears and disappears most frequently with the fever, and

whenever it remains after the cessation of the fits, their return is to be expected, and the treatment which has suspended them ought to be continued.

It is important to determine the volume of the spleen, and this can be done with exactness by means of percussion.

If we percuss this organ in some cases of hypertrophy, in which it is below the borders of the false ribs, we detect the disease; but we cannot do so in other cases of hypertrophy in which the spleen is prolonged upwards instead of extending downwards.

It is mediate percussion which determines the nature of the disease, when the lesion occasions dyspnœa and causes an affection of the respiratory organs.

Distention of the Stomach.

It has been already observed that the variable size of the stomach prevents us from assigning to it any precise limits. Nevertheless, with a little practice, the ordinary state of this organ cannot be confounded with an abnormal distention of it.

In the latter state, if the stomach is filled with gas, it will yield a tympanitic sound over a more considerable extent than in the normal condition.

There have been cases of excessive distension of the stomach in which the organ descended almost to the iliac regions. In other cases the dilated organ ascends, pushes the diaphragm upwards, and causes considerable dyspnœa. Percussion has more than once discovered in this last case an affection of the stomach, which was presumed to depend on disorder of the respiratory organs.

Persons who suffer from obstinate dyspepsia with flatulence, and more especially those of sedentary habits, who are nervous or hysterical, are very often troubled with gas or flatulence, which often distends the stomach and intestines to a greater or less extent, and causes spasm and painful expansion of these organs. I have observed cases in which the distended stomach could be exactly traced, and somewhat resembled an inflated ox's bladder. Individuals who experience such distension, have also frequent eructations, and are very liable to colic and inflation of the intestinal canal, more particularly in the cœcum and colon. Percussion will elicit the tympanitic sound in such cases, and most remarkably in nervous hysterical women, and young children. In these cases the distended stomach, and sometimes the abdomen, bear a strong resemblance in form and in sound to a bladder filled with air or gas.

When medicines do not relieve patients with this affection, the introduction of a stomach elastic tube into the rectum and colon, first proposed by Dr. O'Beirne of Dublin, will in general allow the gas to escape, and quickly remove the distension of the abdomen. The use of the tube has in a few cases superseded the necessity of the cutting operation for strangulated hernia. I have employed a gum-elastic catheter in cases of children with great benefit.

Stercoraceous Concretions.

The intestines usually give the tympanitic sound, but less clear than the stomach. This clearness of sound is owing to a greater or less quantity of gas. It disappears by the accumulation of fæcal matter in the large intestines, which occasions much derangement in the economy.

At one time these concretions or substances produce but a simple obstruction, which can only be detected by mediate percussion. This detects a dull sound in the region in which the accumulation exists, and the fixed situation of the dull sound will readily enable us to distinguish this condition from an effusion in the abdomen, either general or sacculated.

In other cases, the intestine is filled at the same time, with fluid and gas, and will yield the hydropneumonic sound. But as the same sound may, according to M. Piorry, be detected in cases of slight effusion, complicated with tympanitis or meteorism, it will be of great importance to distinguish these two cases. We obtain this information by changing the position of the patient.

The fæces may also be collected in globular masses, and cause projections on the external surfaces of the abdomen. These collections have been confounded with morbid tumours of totally a different nature, with abscesses which it was determined to open, or with adhesions or agglomerations of the intestines, the result of peritonitis. At another time, the fæcal matters, without projecting externally, compress the nerves and adjacent blood vessels, and either occasion sciatica, œdema of the inferior extremity, or finally, symptoms of nephritis or calculous affection of the kidney, by compressing the ureter. Cases of all these kinds have been observed by M. Raciborski and others.

It is chiefly by means of the plessimêtre that the hidden causes of these various diseases are discoverable.

When the fæces form projections appreciable on the surface of the abdomen, percussion discovers by the sound and resistance of the tumour, as well as the vicinal organs, which of the organs is the seat of it. If it is the intestine, the nature of the tumour will declare itself by the progress and other symptoms of the disease.

In the cases in which the stercoraceous matter depresses the adjacent organs, without being evident externally, the plessimêtre, by depressing the abdominal parietes, discovers the presence of fæces by their dulness and resistance, and indicates in a certain manner, the efficacious treatment of a disease which has for a long time eluded all other remedies.

A woman, thirty-eight years of age, was affected with peritonitis, induced by an accumulation of fæces. The complexion was jaundiced, and the bowels had been constipated for some days. The abdomen was painful on the slightest touch, there was vomiting, the pulse was small, there was an expression of suffering on the countenance, and there was no doubt of the existence of peritonitis. A tumour was now perceived in the transverse colon. This tumour had no adhesions, was hard and knotted, and the patient had only perceived it for the first time. This circumstance, added to the absence of alvine motions for some days, suggested the idea of a stercoraceous collection, which by distending the coats of the intestines, might have given rise to peritonitis. It became necessary to use active measures against this last disease. After depletion, the pain subsided, but the tumour remained. The result corroborated the first conclusion. Purgatives were used freely, copious alvine motions followed, the tumour disappeared, and the patient got well.

Nervous and hysterical women, and persons of sedentary habits, especially when advanced in life and liable to stricture of the rectum, and other obstructions from the pressure of morbid tumours, are subject to accumulations in the intestines. M. R.

CHARING CROSS HOSPITAL.

An elegant entertainment was given for the first time at the noble and spacious mansion, immediately ajoining the hospital, which was attended by upwards of five hundred individuals, embracing not only many of the principal contributors to the charity, but also many distinguished individuals of the learned professions, as well as the heads of Kings College Strand, the Ophthalmic Institution, the Royal College of Physicians, the Council of the Royal College of Surgeons, and the constituted authorities of the Worshipful Company of Apothecaries.

Mr. James Crow was unanimously called to the chair, and proceeded as follows:—" Ladies and Gentlemen, unaccustomed as I am to public speaking, I cannot find words to express my gratitude. Proud as I have ever been to have been called to the chair on any occasion, yet on this my heart is filled with emotion, when I consider that such a respectable body of this community, and so many highly gifted and talented individuals, are now met under this my own roof. (hear, hear, hear). You will perceive that I have not been unmindful of the comforts of my guests, and though I cannot presume to have furnished and decorated this mansion like the houses of some of the nobility, yet for domestic comforts it is not to be surpassed, (cheers). Unaccustomed as I have already said to public speaking, allow me to propose a toast which I am sure you will drink with three times three; 'King's College, and may it continue to enjoy all those blessings and that progressive developement, which has been manifested since the first hour of its birth, to the attainment of which myself and enlightened colleagues have never been fround wanting.'"

Professor ———, rose and returned thanks amid great cheers. He said, " having *voluntary* resigned the highly honorable and no less lucrative situation enjoyed at King's College, it cannot be supposed in returning thanks, I have any thing like a selfish feeling, (certainly not), I am proud to have an opportunity of declaring my sentiments and opinions regarding that noble institution. I regretted exceedingly that Mr. Green's speculation of transporting the pupils from King's College to St. Thomas's Hospital, by a steam boat, turned out to be a Chimera, and that the favourable opportunity which professor Green's failure at the time offered, was not seized upon, to produce an union, which I have no doubt would have been harmonious and advantageous to all parties connected with King's Col-

lege, and this benevolent institution (cries of no, no, and yes, yes). It could not however be expected, that our worthy director could submit to the degradation of giving up his high prerogatives, so abundantly lavished in deeds of charity and benevolence, (hear, hear), and allow any set of individuals to make use of such an admirable institution, merely for the sordid purposes of gain, (cries of shame). The director therefore deserves our warmest thanks for the stand he made on this occasion, in defence, and in support of his own interests, and that of the hospital, the flourishing state of which, as well as the mansion in which we are all now assembled, amply testifies. (Great cheering mixed with groans).

The Chairman next proposed the health of the present Medical Staff of the Hospital.

Dr. ——— returned thanks. "I am happy to congratulate the Meeting of having got rid of some of its troublesome servants (hear). I did all I could, and shall ever continue to purify the establishment of all its dross; and though physician to this excellent institution, I have taken great pains never to put my judgment in competition, far less in opposition, to that of the director—that distinguished man who has been our architect, our president, our chairman, our secretary, our treasurer, our physician, our apothecary, our druggist—and though last not least, our able accoucheur.—(Laughter and applause). As to King's College, I have taken the caution both to approve and disapprove of a connexion with it (hear). It is an excellent rule in life to please every one, and displease no one (applause). When I once deviated from this rule I got into difficulties, and, of course, regretted it (laughter). The letter which I published in the *Times* against one of my late colleagues, has caused the profession to sneer (surprise), though I commenced the duties of a teacher at that time of life when most men think it prudent to retire, yet I am not superannuated; and Dr. Sigmond was premature in throwing this in *my teeth*, as I am now lecturing never to less than three pupils, which are all gratuitous (great applause).

Mr. —— begged leave to return thanks for the honour they had done him in drinking his health. He could give no greater proof of his sincerity for the welfare of the Hospital, than his having given no less a sum than five hundred pounds sterling to procure the situation he now holds. Though I had promised that this act of liberality should not transpire, public duty demanded a confession (cheers). I don't feel ashamed of the transaction, though it may not redound to my credit (applause). All my anxiety now is to get the money refunded—or to obtain some compensation—if I can only manage to remain long enough amongst you. I hope there will be no objection to my making such a *private* arrangement with my favourite pupil, Mr.—, as shall fully recompense me for all expenses and disbursements. I have already made such an arrangement with him about my Museum, which is in every way satisfactory to me (hear,hear). Though he has already paid the money, I have bound him down not only to give me the use of the preparations during my lifetime, but to be at all expense in spirits, bladders, &c., to keep it in order (cheers). I am happy to be able officially to announce to this meeting, that the Council of the College of Surgeons have thought fit not to bring my case forward. The fact is, there are many worse cases amongst themselves (cheering). It was not to be expected that they would long recognise our Hospital, when it was discovered that the hundred beds were only filled up one day, when they came to see them."

Dr. ——— next rose, and wished to take the present opportunity of explaining some parts of his conduct on the late events which may have appeared ambiguous. My first connexion with this institution, I freely acknowledge, I owe to the friendship of two gentlemen who have lately resigned their respective offices, much, I fear, to the injury and respectability of the institution (cries of yes, and no, no, sir). My first introduction to you, James (addressing the chairman) was through these eminent individuals alluded to (surprise); but I had no hesitation in supporting you in all your laudable measures, whenever I saw that my own interests where entwined with them. Had I not done this, I might have been completely floored (laughter).

Mr. ——— rose, begged leave to state to this meeting, that the drugs supplied to the hospital were of the best quality, and charged upon the lowest terms. The imputations made upon them were no less false than they were malignant. The near affinity with the director, made me more anxious to give them good and cheap.

Several individuals now rose, who were

connected in supplying the hospital with its various wants, in order to make similar explanations; but the chairman caught the eye of a reverend gentleman whose name we could not learn. He begged leave to correct some statements which had gone abroad, and which had been assiduously circulated by some ill-disposed people, in order to cast an obliquy on the important religious services which had been from time to time performed by Lady ——— to the patients of this hospital. Some of the present company are not perhaps aware that Lady ———, imitating the bright example of Mrs. Fry, profferred her services on a late occasion to a young female who had been a patient in the hospital, on account of a certain complaint brought on by her own imprudence; and it was arranged that Lady ——— should come to her bedside the day previous to her dismissal, in order that she might admonish her for the wickedness of her past conduct, and point out to her the road which she ought to follow for her future spiritual comfort. In accordance with the arrangements which were made, Lady —— approached the bedside, and unfortunately, without looking at her patient (her mind being inspired) she commenced a very impressive discourse, pointing out the enormity of concupiscence, when, after an impressive discourse, the patient turned round, and turned out to be an old woman of 70, with a fractured leg, who had replaced the last patient only a few hours before the angelic visit of Lady ——. The mistake was now discovered, but it did not deteriorate from the previous zeal and good intentions of her ladyship, for her discourse was calculated to excite repentant thoughts in the mind of the old woman, whose youthful conduct might, in the nature of things, merit censure. It is to be hoped that other ladies of title and fortune will follow the example of Lady ——, and not only supply spiritual consolation, but also the means of forwarding the objects of a valuable institution (hear, hear). The speaker then read the certificates in favour of the excellent management of the hospital, and put it to the meeting, whether they did not refute the opinion of the Royal College of Surgeons, and prove the want of truth in the statements put forth by the retired medical officers. He had heard, but he did not credit the rumour, that these individuals were advised by Sir Frederick Pollock to apply for a mandamus next week, and were likely to obtain it; but this would be ruinous to the committee and their hospital. He hoped the untoward event might be averted, and the restoration of the medical officers in question would remodel and overturn the admirable system of management hitherto pursued. He was, however, no advocate of "might and not right," and if the mandamus issued, all good citizens would of course obey it, (Hear, hear. No, no.)

Considerable surprise was now manifested, and the Chairman dissolved the meeting.

Medical, Literary, and Clinical Society.

A meeting of this society will take place in the theatre on Saturday at 7 o'clock P.M., for the purpose of dissolving the society, and considering the propriety of either returning the books of the library to their respective donors, or of selling them at the hammer.

JAMES CROW, Secretary.
72, St. Martin's-lane.

MEDICO BOTANICAL SOCIETY.
November 23rd, 1836.

HENRY JUDD, Esq., Chairman.

Advantages of the Linnæan System.

C. Johnson, Esq., Professor of Botany to the Society, delivered a lecture on the merits of the natural system of botany, as applicable to purposes of classification. He commenced by briefly remarking on the utility of the science, and the necessity of its being studied as well as other branches of natural history and philosophy, likely to advance the happiness of man. He rightly observed, that there were two classes of persons who style themselves botanists, viz. — the mere searcher after and collector of flowers, regardless of all improvement in the science, and the industrious cultivator and contributor to its advancement. This remark was applicable to those pursuing the two systems of botanical classification now in use, viz.—the Linnæan (commonly termed artificial), and the natural system of Jussieu and Decandolle. The latter method, he could not deny, was useful, inasmuch as the student would by it acquire a knowledge of the most minute details; but it could not, he thought, be relied on for discriminating or classifying plants at the moment when met with. As an illustration, he observed that the natural orders Pomacæa and Prunacæa, although in their general outward appearance nearly alike, differ materially in their proximate principles; the first, as in

apples, &c., contains malic acid; whilst the latter, as in the Laurus family, contains prussic acid—two principles as different and as distant from each other in their effects as the antipodes. The same remarks might also be applied to the astringent order Rosaceæ and the acrid poisonous family of the Ranunculaceæ. Many plants, too, of the umbellifferous kind, as the cicuta, oenanthe, &c. (deadly poisons), are known only from certain culinary herbs, as the carrot, parsnep, celery, &c., by their generic characters all which go far towards establishing the superiority and importance of the Linnæan system. The natural system, Mr. Johnson is of opinion, will ever be of limited value, until it arrives to a far greater degree of perfection, and which, like the dreams of alchemy, he considered would never be realised. If, too, we still persist in pursuing this mode of classification, we may go on, *ad infinitum*, multiplying orders, genera, and sub-genera, the characters of which would then be ultimately converted into specific distinctions. Mr. J. urged many cogent objections to the exclusive adoption of the natural system so called, and indeed, we should say, that, the botanical analogies in the Jussieuean families, as assumed by Decandolle, appears subject to too many exceptions and anomalies to be of much utility, that is, in respect to the investigation of one of the most essential and important parts of botanical science, viz, the physiological or medicinal properties of plants. The learned professor, who was listened to throughout with profound attention, concluded by observing, that the system of the immortal Linnæus, from its simplicity and easy mode of distinguishing plants, must yet be the soul of botanical classification, if ever it be surpassed.

Narcotics.

On the table were exhibited various specimens of narcotics, among which was some opium obtained from poppies grown in the Mauritius.

Dr. Ryan made some observations on the use of the croton oil, which he had found of great benefit joined with tartar-emetic ointment, in cases requiring a great degree of counter-irritation, producing a pustular eruption in the course of a very short space of time. In cases of obstinate costiveness, particularly that accompanying apoplexy, he had found it of great service. He had employed the buchu leaves with good effect in obstinate urethral and vesical affections.

Mr. Judd had employed the buchu leaves extensively with great benefit in obstinate gleets.

A Cyclopædia of Practical Surgery, being a Series of Original Dissertations on Operative Medicine. By an Association of Physicians and Surgeons. Edited by Wm. B. Costello, M.D., Member of several Learned Societies, both National and Foreign.

(Preparing for immediate Publication.)

We have much pleasure in placing the following address before our readers.

"This work has been undertaken for the purpose of collecting into one copious and comprehensive Digest the doctrines of Surgery, which are now scattered in numberless volumes, and the valuable views of practice, which either rest on individual experience, or are inculcated in too isolated a manner for the general benefit. The inducements to such an undertaking are numerous and encouraging. Already has the therapeutical department of the healing art received an able exposition, from the union of industry and talent to which the 'Cyclopædia of Practical Medicine' owes its birth. Surgery ought to keep pace with its sister science. The progress of surgical improvement has, of late years, been so rapid and extensive, and some of its long-established processes have been so remodelled or totally changed, that a work in which the entire body of surgical doctrine and practice shall be collected, and raised to the level of the present time, is imperatively demanded.

"The modern method of association offers the same advantages in literary undertakings, as in those of any other description of speculation. But in matters of science, it has this peculiar advantage, that the appetite for positive information is more certain to be amply provided for, the spirit of exact inquiry more likely to be fully satisfied, when the task of presenting any extensive division of the useful sciences is confided to a number of competent persons, than when it is attempted by any single individual, however qualified for the task by vast acquirements, or great powers of condensation.

"The paramount object has been to distribute the articles, not merely with reference to the general ability of each individual author, but to endeavour, as much as possible, to employ the talents of each contributor on such subjects as

his established reputation or previous writings have proved him to be eminently qualified to treat. On this plan, the projectors of the Cyclopædia of Practical Surgery have sought to embody, in one great work, a series of monographs from the ablest pens, on subjects, which, if the writers of them had chosen to incur the expense and trouble of authorship on their own account, they would most probably have selected.

"The direct effect of such a combination of talent, will be not only to exhibit the present state of Surgery, but to advance the art itself, by calling forth the co-operation and energies of some of the most eminent men in the profession. The dissertations of which the work will be composed, will be the clear, complete, and concise statement of the opinions of their authors upon the subjects treated, supported by all the force of fact and reasoning that can be found in volumes written upon each subject in particular; not a mere compilation from other men's opinions, or from quoted authorities, but the authentic exposition of the experience of the writers themselves, confirmed and developed by reference to the practice of the profession at large.

"Arduous professional duty must, in the vast majority of instances, restrict the practitioners to the simple observation of the cases that come before them. For the great body of medical men, therefore, the condensation of instructive information is an all-important desideratum.

"The Cyclopædia of Surgery will form a library for the surgeon, in which he will find the information contained in the best special works on any surgical subject, without the fatigue which he has now to encounter from diffuseness; as well as a book of reference for the busy practitioner, comprising all useful and indispensable instruction. The value of such a book, in the various and serious emergencies of surgical practice, can hardly be overrated. It is, in fact, precisely the kind of work, of which, on some important occasion, every practitioner has felt the want.

"The due explanation of surgical processes depends so much on plates representing the parts concerned, or the instruments employed, that attempts to convey a writer's meaning, without such aids, must often be fruitless; and as the clearness of description is best insured by illustrative plates, incorporated with the text, the present work will be thickly interspersed with wood-cuts, not only embracing the operative methods long established, but also those of recent intoduction into practice: of these we may mention the examples which will be found under the heads of Bandages, Fractures, Lithotrity, Orthopedy, Obstetricy, Stricture, &c.

"The materials of the work will be arranged in alphabetical order; but a tabular arrangement has also been prepared, of which a specimen will be given with the first number, by means of which the Cyclopædia of Practical Surgery will combine for the reader, the advantages of a Dictionary with those of a work, *ex professo*, on each of the great divisions of Surgery.

"The object of the Proprietors of this important national Work has been to prepare ground on which men, distinguished in every department of Operative Surgery might deposit the accumulated results of their experience, the fruits of their industry, or the creations of their genius, for the promotion of science and the public good; and thus to erect a monument, which, at any future period, may justly be referred to, of the present state of Surgery, not in England alone, but on the continents of the Old and New World."

Conditions.

1st.—The size and form of the Cyclopædia of Practical Surgery will be similar in every respect to the "Cyclopædia of Practical Medicine" and the "Cyclopædia of Anatomy and Physiology;" it will be printed in double columns, with a new type, cast expressly for the purpose, on superfine paper of the largest Royal octavo size.

2nd.—The work will be completed in 21 Parts, and will be illustrated with wood-cuts and other engravings, wherever they may be considered requisite; each of the articles will be authenticated by the signature of the writer.

3rd.—The first part will be published with as little delay as possible, and will contain the tabular distribution of the matter; the other parts will be continued regularly on the first day of every alternate month until completed. Price 5s. each."

Eighty of the most eminent physicians and surgeons of the united kingdom, and some of the most celebrated continental professors are associated contributors to this national work; every one of whom is distinguished as an author, a professor, or a practitioner. Never was there such a galaxy of talent on any of our national

works on medicine. The highest praise must be awarded to the proprietors of this truly great production, for having secured such a congregation of celebrated contributors.

The first number of the Cyclopædia of Practical Surgery will appear immediately, on the same moderate terms as its predecessors, the Cyclopædia of Practical Medicine, and the Cyclopædia of Anatomy and Physiology. It is scarcely necessary to observe, that the whole of surgery will be given, including obstetricy, so that this comprehensive and valuable work will be useful to every class of medical practitioners, to foreigners desirous of obtaining in one view, a knowledge of the present state of practical surgery in this empire, and also to medical students.

The three Cyclopædiæ will contain as much matter as 100 ordinary sized octavo volumes, and form an excellent medical library on the most moderate terms.

The British Medical Almanack, 1837, *continued annually*. Edited by William Farr. Sherwood, Gilbert, and Piper.

This valuable Annual is very much enlarged this year, and a great deal of useful information introduced into it. It is really surprising that so much instructive matter can be given on such remarkably low terms, and this is a strong proof of the willingness of the respected publishers to cooperate with the profession in advancing medical science. The British Medical Almanack far surpasses any periodical of the kind hitherto published, and must have a place in every medical library in the kingdom. It embraces every thing connected with the polity of medicine, and contains in addition, much scientific matter inaccessible to the greater portion of medical readers. Thus there is a full chronological history of medicine, continued from last year, which commences with the rise of the Arabian schools, and is extended to the time of the illustrious Harvey. Though the greater part of this period belongs to the dark ages, it is replete with interest and well worthy of careful perusal.

The next point of interest is, a full account of all the medical schools in the United Kingdom. This is fuller than that of last year. Then comes an article, on the rise and progress of the Provincial Medical and Surgical Association, which will be perused with satisfaction by every liberal member of the profession. The other novel features are thus described in the introduction:—

"The Statistics of Mortality and Sickness form the basis of medical science. Without a knowledge of the laws of mortality and disease on a large scale, and without being well versed in the methods by which they are deduced, the Physician practises unguided by the light of general principles, which, even in individual cases, should never be forgotten. The application of the Constant—discovered by Mr. Edmonds in investigating the rate of general mortality—to the sickness and the fatality of attacks at each age, is one of the most important accessions lately made to pathology. Numbers, although they have contributed so much to the progress of other sciences, have been very sparingly applied to medicine. This is partly the fault of the schools. Mathematics were cultivated in the English Universities, but their application to the natural sciences was not pointed out; and the abstract principles escaped from the mind. Mathematics did not form a part of the studies at the Scotch Universities, where a majority of the English Physicians were educated; and in London these principles are still neglected for Latin,—an instrument of insignificant importance when weighed against the elements of arithmetical science. A good authority stated, that there were four members in the *unreformed* House of Commons who, on an emergency, could convert a vulgar into a decimal fraction. The mathematics of our presiding bodies are, we hope, in a more flourishing state. Medical statistics at present, only require a knowledge of the simplest rules of arithmetic; but the applied mathematics would be an excellent substitute for Latin in the examinations.

"The Rev. Charles Oxendon's Table of the present state of *Post Mortem* Examinations in the English Hospitals will be read with interest and pleasure. A formulary of new medicines, in the absence of a Pharmacopœia was indispensable. When a new Pharmacopœia is published, it may still remain useful.

"The writer of the article National Statistics has rectified the errors which the English government has been unconsciously diffusing from year to year. Two injuries have been committed; the

public money has been sacrificed to procure incorrect results, and the public has been misled. The loss of 300,000*l.* is only a slight consequence of the official errors. Yet 300,000*l.* would have made a noble foundation for the new University. With 300,000*l.*, many scientific investigations may have been carried to a successful issue. To lose it, the government actuary did this violence to medical science,—he admitted that selected hale men of 80 or 90 years would live no longer than the entire class—sick, infirm, and bedridden included—at that age.

"The subject of *Hospital Statistics* and Registration will, we think attract the attention of some of the talented persons connected with the hospitals. The Hygrometic by evaporation, invented by Dr. Mason, is an instrument calculated for general use."

We have adduced enough of proof in support of our opinion, as to the great utility of the British Medical Almanack; and we entertain no doubt, but that it will obtain the universal patronage of the profession. It already enjoys a most extensive circulation, and it well deserves it.

A Bedside Manual of Physical Diagnosis, applied to Diseases of the Lungs, Pleuræ, Heart, Vessels, Abdominal Viscera, and Uterus. By Charles Cowan, M.D. &c., Sherwood and Co., London, 1836.

The author informs us in his preface, that his little work is not intended to rival or replace any of the more extended and didactic treatises upon auscultation or percussion, but to furnish the reader with a summary of the best established signs for the diagnosis of disease, supposing a previous acquaintance with their individual value and interpretation, as well as with the nature and application of the means best adapted to their detection. This work is certainly what the author professes it to be, a remembrancer for those acquainted with the phenomena of auscultation and percussion, but it is almost perfectly useless to those about to commence the study of those means of diagnosis. Had Dr. Cowan given a succinct tabular view of the signs afforded by auscultation and percussion, his book would be intelligible to all, and a very useful manual. It certainly affords evidence, that he is well acquainted with the subject of which he treats, but he ought to have recollected, that the majority of his brethren are not so.

On the Disease of the Hip-joint, with plain and coloured plates. By William Coulson, Consulting Surgeon to the London Lying in Hospital, &c. &c., 4to., pp. 111. Plates vi., London, 1837. —Hurst.

The substance of this work has already appeared in one of the Medical Journals; but the author now offers it in a more perfect form, as he is enabled to represent, "what he has not found in any other work, the appearances observed on dissection in the earliest stage of the disease, opportunities for the observation of which, but seldom occur in the most extensive practice. These appearances lead one to infer, that the disease commences most frequently, (if not invariably) in the synorial membrane, that the round ligament is very early destroyed; and that the disease of the cartilage and bone usually follows that of the membrane." Such is the pathological view taken by the author. He has found it difficult to name the disease scientifically, and has therefore retained the popular term for it.

The work establishes a correct view of the cause of a common disease, hitherto imperfectly understood, and consequently injudicously treated.

THE CHARING CROSS HOSPITAL.

We have just read with no small surprise, an advertisment for a physician and surgeon to the Charing Cross Hospital, emanating no doubt from the same party, who have taken upon themselves to dispense very unceremoniously, with the valuable services of Dr. Sigmond and Mr. Pettigrew. We are quite satisfied that no respectable physician or surgeon will subject himself to the insulting conduct pursued towards the gentlemen whose places it is fruitlessly attempted to fill up. The examples of the Juntas of Aldersgate, and the Greville Institutions, are so fresh in the recollection of the profession, that no one but some unknown adventurer seeking practice, will become a candidate for the vacant offices. We know that while we are writing, a mandamus is being applied for, to reinstate Dr. Sigmond and Mr. Pettigrew; and that there is also a requisition to call a general meeting, to consider the late extraordinary proceedings.

ROYAL PHARMACEUTICAL

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A PRACTICAL ESSAY

ON THE

TREATMENT OF FRACTURES OF THE BONES OF THE LOWER EXTREMITY,

Illustrating Chiefly the Successful Treatment of Fractures of the Thigh Bone, in the extended Position with the Apparatus employed in the North London Hospital, and the Comparative Superiority of this Plan of Treatment over that of the Double Inclined Plane; with Cases. (Read before the Medical Society of the London University).

By Wm. Hallam, Esq., M.R.C.S. Lond.

House Surgeon to the North London Hospital.

(Continued from page 401.)

Extension, counter-extension, and coaptation are the means used to reduce, adjust, or as it is commonly called, to set a fracture. The meaning of these terms is so well known to you, that I need not enter into a definition of them. In setting fractures of the thigh or leg, you should observe that the pelvis lies even, by comparing the anterior superior spinous process of each side with the other, these are visible and to be felt under the skin. The sound limb should be your "standard of comparison," if I may use the phrase, in setting the fractured one, and you should adapt your apparatus to this first. The position of the foot should be well attended to, the ball of the great toe should be kept in a line with the inner border of the patella, and so continued up to the anterior superior spinous process of the ilium of the sane side. It may not be here out of place to remark to you, that the natural bony prominences in different parts of the human body, which are to be felt under the skin, deserve to be well studied by every one who wishes to become a practical surgeon. A knowledge of their normal appearances, situations, and relations, will be found of infinite use to him in the treatment of fractures or dislocations. In treating fractures of the thigh bone on the double inclined plane, for instance, where you cannot so well judge of the length of the limb or position of the foot as in the extended position, you can measure with a tape the length of the two from the great trochanter to the head of the fibula, and so on to the external malleolus, and thus you may be sure that the fracture is in situ. In a dislocation or fracture of the neck of the thigh bone, where crepitus is not distinct, or you cannot easily make out the nature of the injury, you will find it of use to compare and measure the distance between the great trochanter and anterior superior spinous process on either side to assist your diagnosis. In fractures or dislocations at the elbow joint, it is of the greatest importance to know well the relative position of the olecranon and the internal condyle, they may generally be felt in the midst of the swelling. At the shoulder joint the acromon and coracoid processes which are to be felt, are never to be forgotten in injuries about this articulation. Those who have paid but little attention to these points of "Relative anatomy," if I may use a coined term, will do well to study them on their own bodies. I would recommend any of my friends here who do not get up at eight o'clock in a morning, to Dr. Elliotson's lecture, and who are not acquainted with this part of the anatomy of their own bodies, to be awake at this hour for a few mornings, to ruminate on these points while their bodies are in a state of nudity. I am sure an hour or two spent in making yourselves well acquainted with these natural eminences, and the depressions, which are so many topographical guides to arteries in different parts of the human body, will never be regretted by the student in surgery. The study of the exterior of the body is a branch of anatomy greatly neglected in this country. Some students in medicine come to London to learn anatomy, which, to use the words of that distinguished surgeon, Sir A. Cooper, "is the real groundwork of all medical science," they attend lec-

tures, (or at least should do) on general and descriptive, and demonstative or practical anatomy; they take off the integunal, and dissect the various parts of the body, but what do many learn by this? Why nothing which is of practical utility; 'tis true they learn to describe a muscle, a blood-vessel, a nerve, or a bone by rote, or like a parrot, but when they enter the field of practice, they are bewildered if they meet with a case of dislocation or fracture; and why is this? simply because they have neglected the study of the anatomy of the exterior of the body. Teachers of anatomy should look to this, they should urge upon their pupils the imperative necessity of becoming acquainted with this important branch of the science. I have heard and read several introductory lectures on anatomy, and I have perused the prefaces to some of our best elementary books on the subject, but in none of these have I heard the student advised to make himself acquainted with the anatomy of the exterior of the body. In Paris and in the different continental schools, I understand some attention is paid to the study of this branch of the science. In your dissections the relations to the surface of the body, especially of deeper seated parts, should always be well borne in mind. Matters of minor importance are frequently too much attended to, while others of the greatest moment are altogether neglected. I once heard of an architect of some celebrity, who drew out a plan for a public institution, three or four stories high, but forgot the "staircase" in the plan, or at least I suppose he forgot it, unless he intended to have the inmates drawn up by machinery, or by some steam contrivance. But, to return from this digression.

The bed on which you should treat a fracture of the thigh bone, or indeed any fracture of the lower extremity, should be firm and unyielding in the bottom (it should not have a sacking bottom). A straw mattress is laid on the frame-work, and this is then covered with a couple of blankets and a sheet. In treating fractures of the thigh in the extended position, there is no necessity for a cradle, as there is if you make use of the double inclined plane; this is an inconvenience to the patient in cold weather, for he is constantly chilled by the cold air getting under the bed-clothes, which he cannot keep close about him. Several patients in our hospital have complained of this. But besides this, the extended position has several other advantages: the first is, that the apparatus we employ is easily procured, in every situation and under all circumstances, for the trifling expense of a shilling or eighteenpence at most, and it is capable of being made in ten minutes by any common country carpenter. To a surgeon in country practice this is a decided advantage; he need not ride on horseback with his splints under his arm, and let all the neighbourhood know that he is going to set a broken thigh, though, by the bye, young surgeons just commencing practice have recourse occasionally to act a little of this sort of thing, as well as journeys to bleed milestones and finger-posts, and now and then putting on splints for a fracture where none exists, for the purpose of getting their names up. It is astonishing how the public are gulled even in our day, though the march of intellect has advanced rapidly of late years, and many persons have learnt to physic themselves.

The next advantage of the extended position over the double inclined plane is, that you can always judge better of the length and position of the fractured limb, and compare it with the sound one. The patient is also more easily moved or lifted up without disturbing the fracture, when it is necessary to change his bed-linen, and the bed-pan is made use of with much greater ease and comfort to him. But the greatest advantage of all is, that the patient lies easier and more comfortable than with the double inclined plane, and there is no stiffness of the knee left after the fracture has united, as there mostly is with this apparatus. The treatment of fractures of the thigh on the double inclined plane in one of the London hospitals is very faulty; for the patient is laid on his back, and the limb placed on a simple apparatus, which has certainly in this respect the advantage over more complicated and expensive ones; I allude to the double inclined plane, constructed of two pieces of deal board joined at an angle, with pegs stuck along the sides to prevent the limb or pads from falling off—"peg boxes," I think, the dressers at Guy's call them. As it is employed in some of the London hospitals, it is first padded, and the fractured limb is then placed upon it, without being at all secured, and consequently every movement of the patient, who is lying on his back, must derange the upper fragment which follows any change of position or motion of the pelvis. The soft materials of the padding too, placed on the appara-

tus after a short time give way under the knee and thigh, which sinks down and causes the ends of the fracture to ride over each other; the line from the trochanter major to the head of the fibula being considerably shortened, as will be proved by measuring the distance between these two points when the fracture is first put up, and in a day or two afterwards. In St. Thomas's hospital, Mr. Tyrrell (with whom I had some conversation on the treatment of fractures of the thigh a short time ago) uses a double inclined plane sufficiently large for both the sound and fractured limbs to lie upon, the thigh part extending a little beyond the tuberosity of the ischium. He thinks that by using this apparatus the pelvis is kept more steady and more even than when you use one plane merely for the fractured limb; he thinks, also, that you can always judge better of the length of the limb, and compare it with the sound one. The very excellent fracture bed of Mr. Earle is convertible into a double inclined plane, and may be used to answer the same purpose.

Another advantage of the extended position is, that where the patient complains much of sore back from lying for three or four weeks on a hard mattress, he may be safely placed on the water-bed without any danger of the fracture becoming deranged. Under similar circumstances you cannot treat a fracture of the thigh bone on the double inclined plane.

Some surgeons urge as an objection to the extended position, the frequency of ulceration, and even sloughing, produced by the perineal band. In some few of the cases which I have seen treated, some excoriation or chafing has been produced, more especially in young subjects, where the pressure has been long continued; but this has always been easily remedied by dressing the part with a little Unc. Cetacei, spread on fine lint, and a compress of cotton wool placed on the part where the extension band makes the most pressure. I have never seen any degree of what would be called ulceration produced from this cause, and never any sloughing.

From the facts stated, and from the result of cases which you have seen treated in the hospital, I think most of you will agree with me that the treatment of most, perhaps of all fractures of the thigh bone in the extended position, is infinitely superior, more simple and effectual, than by the treatment of the double inclined plane. Particular cases may occur where you are in some degree compelled to make use of the double inclined plane; for example, in the case of the poor man Sayers, now under Mr. Cooper's care in ward (2), who was admitted into the hospital three or four weeks ago, with a severely lacerated wound of the right side of the scrotum, exposing both testes (which protruded) and the cords, and a comminuted fracture of the upper third of the right thigh bone. He had received these injuries from jumping accidentally between a barge laden with coal, as it was sailing along, and the wall of the tunnel at the Regent's Canal, Somers Town. In this case we could not apply the long splint to the outer side of the thigh on account of a wound, nor the extension band on account of the injury of the scrotum. This case illustrates too what I have stated about the soft materials of the padding sinking down under the knee and thigh, and thus deranging the fracture. The limb lay perfectly easy and in good position for the first and second days after it was placed on the splint (M'Intyre's apparatus, with side splints), but on the third day the knee had sunk, and the bones rode, and it was necessary, as it has been several times since, to readjust the fracture.* This too is another inconvenience of this method of treatment. In the extended position the apparatus does not require to be readjusted above half as often as in the other.

As facts are better than arguments, I shall read to you the following cases, which will best illustrate both plans of treatment; after which I will proceed to show you the manner of applying the long splint we use in the hospital in fractures of the thigh, and also the double inclined plane.

Case 1.—Richard Moulden, aged 38, a short, robust, healthy man, labourer at the Birmingham railway, was brought to the hospital on the 2nd of January, 1836, and placed under the care of Mr. Liston, whose dresser I was at that time. On examination, the right thigh bone was found to be fractured obliquely, about two inches below the middle of the shaft.

* We have now got the fracture put up with the long splint, as it was so difficult to manage it on the double inclined plane. He lies much more easy and comfortable. In other respects he is going on well. The wound of the scrotum is filling up kindly by granulation, and there is every prospect of the man recovering with as good a limb as the other. (W. H. Oct. 3rd.)

The accident was caused by him slipping down a plank at the tunnel of the railway at Camden Town, whilst wheeling a barrow up it in the dark, the barrow and its contents falling upon his thigh. The fracture was reduced and put up with the long splint. He lay in bed without the least pain until the 4th of February (thirty-three days after the accident), when the apparatus was removed, and the fracture found firmly united. There was no shortening or deformity of the limb, or eversion of the foot. This man now resides in William Street, Portland Town. There is a remarkable coincidence in the case of this man, for he had the other thigh fractured about twelve months since (January, 1835); the bone was broken as nearly as possible too, in the same situation as the last. He was then a patient under Sir Charles Bell, at the Middlesex Hospital, who treated the fracture on the double inclined plane.

This man stated that he would rather lie in bed six months with the limb in the extended position, than six weeks with it "cocked up," as he called it. He lay easier, made use of the bed-pan easier, and had no pain or stiffness of the knee, after the treatment which he had for a length of time after the other plan. With the double inclined plane he was never able to keep the bed-clothe sabout him, so as to keep himself warm.

On the 9th of February, 1836, he left the hospital, and was able to walk without crutches, though he was advised not to do so for the present.

Case 2.—Anne Davis, aged 39, married, no children; was admitted into the hospital, under Mr. Cooper, on the 23rd of December, 1835. The day before yesterday she was knocked down by a cab, the wheel of which passed over the left thigh, about three inches above the patella, causing an oblique fracture of the bone in this situation. She was carried home immediately after the accident, and left in bed without any assistance. Her thigh was much distorted, extremely painful, and, according to her own account, three times as large as the other. The greater part of the second night she sat with it over the side of the bed.

The limb was placed on M'Intyre's double inclined plane, with side splints. On the 24th of December, the Report states, she had a slight degree of fever, and it was necessary to remove one of the wooden splints, the first one, in consequence of its pressing on the patella, causing pain and redness. On the twelfth day after the accident (Jan. 5,) it was necessary to re-adjust the splints, as there was some œdema of the leg and foot, and pain in the knee. On the twenty-fifth day the bandages were again undone, and the Report states that the fracture was lying well, but the anterior splint had caused some uneasiness over the edge of the patella, and a black mark of the integuments. On February 9th, the bandages were removed and the splint taken from under the limb for the first time. The bone appears to have united in a very neat manner. There is considerable œdema of the leg and foot and upper part of the thigh, where the splint galls her. Splints re-applied.

On the 17th Feb. (58th day) the limb was removed from off the splint; it is quite straight and apparently firm. There is one slight excoriation under the knee, which feels stiff and painful. Pasteboard splints applied, and the limb laid on pillows.

On the 21st Feb. (62nd day) the splints were removed altogether, and the limb laid in the extended position. Œdema of the leg and foot continue.

On March 2 (72nd day) as the woman was turning in bed she felt a good deal of pain in the limb, and observed it to be bowed outwards; and on examination it was evident that the provisional callus had given way, for the limb was shortened, and the bones rode. Extension makes the limb its proper length again. Limb put up with the long splint in the extended position.

On the 4th, the report states that she has passed the best night she has done since she has been in the house. On the 7th May the long splint was removed, and the fracture found united.

This woman was kept in the hospital until about a month ago, more as an object of charity than anything else, for she had no friends or home to go to. Her case, however, is interesting, not only as affording instruction with regard to the provisional callus giving way on the 72nd day, but because it illustrates the comparative superiority of the extended position. I asked the woman a few days before she left the hospital the following questions:

If you had your thigh broken again, would you like to have it put up with the straight splint or the bent one?—Why I suppose I must have which was thought best for me.

But suppose you were told the one was as good for you as the other, which

would you prefer?—Oh! I should like the wooden one best; one is so much more comfortable with it, and one's leg lies so much more easy.

Case 3.— M. A. Nunn, aged 7, was admitted into the hospital on the 22nd of August, 1836. Whilst playing with her younger sister in her arms, she fell on the step of a door with the whole weight of her younger sister upon her. On attempting to rise, she was unable to do so. On her admission the thigh was much shortened, deformed, and swollen; and on examination the shaft of the bone was found to be obliquely fractured at the junction of its upper and middle thirds. She had received also from the fall a severe contusion of the left temple. The fracture was reduced, and the long splint applied in the usual manner.

On the 30th of August (18th day) the bandages were re-adjusted; limb quite straight.

On the 19th September (27th day) the fracture was re-examined, and found firmly united; limb quite straight, and as long as the other; plenty of provisional callus. The long splint dispensed with, and side splints of pasteboard applied. She is allowed to go about on crutches.

On the 29th she was discharged cured (37th day).

Case 4.—William Price, aged 60, tall and stout, a regular living specimen of surgical diseases, having got fistula lachrymalis, an old injury of the left knee, clap, and an unreduced dislocation of the radius and ulna backwards of twenty years' standing, produced in a pugilistic encounter. He was admitted into the hospital on the 24th June, 1836, in consequence of a fracture of the shaft of the right thigh bone. States that whilst heaving at the wheel of a cart to assist the horse to back, his foot slipped, and he fell with his leg bent or doubled under him. On his admission, an oblique fracture of the right femur was discovered about its lower third; the limb was shortened about an inch, and the foot was everted. The fracture was put up in the usual way with the long splint.

July 9. The report states that the fracture lies well, and he is quite free from pain. On the 22nd the apparatus was taken off, and the limb examined. It is quite straight, and there is no shortening or eversion. Considerable deposition of callus to be felt. On the 3rd August the apparatus was removed, and the fracture firmly united. To go about on crutches.

Aug. 10. Discharged cured. There is some little œdema of the leg and foot, for which he was ordered a little soap liniment.

Application of Auscultation and Percussion to the Diagnosis of the Diseases of the Abdomen.

(*Continued from p.* 422.)

Distention of the Bladder.

In severe affections of the brain, as apoplexy, compression, congestion, last stage of fevers, paralysis, cystitis, &c., the bladder may become distended with urine, the patient not being aware of it. This circumstance aggravates the primary disease, and may cause rupture of the bladder, or apoplexy, or coma, unless attended to in proper time.

Distention of the bladder is detected by percussion, or pressure, or by the catheter.

The mode of examining the bladder, is to place the patient on his back, and the plessimètre is to be applied with considerable pressure near the navel, so as to obliterate the folds of the intestines situated between the bladder and the parietes of the abdomen. The bladder rarely ascends so high as the navel, and consequently we find the tympanitic sound, but on percussing along the linea alba towards the pubes, we discover the dull sound of the distended bladder, with resistance, and sometimes there is a sense of fluctuation. The examination should be made on both sides of the linea alba. If the dull sound is caused by the bladder, the points of transition from the clear sound of the intestines to the dull sound of the bladder will not form a straight line, but a curved one, corresponding to the superior circumference of the bladder. There will be still more certainty in the diagnosis, by making the patient lie on each side alternately, and on successively exploring the abdomen when the dulness does not change.

It is always essential to examine the bladder in the diseases already mentioned, in fact, whenever volition is lost, although the ordinary attendant or nurse will declare the organ had been regularly evacuated. I have known cases in which such declarations were made by nurses, but on examining the hypogastric region, the bladder was distended as high as the navel. It has also happened that the bladder has nearly filled the abdomen, and been mistaken for pregnancy. It has even occurred that pregnant women have been tapped for dropsy, parturition

induced, uterine and peritoneal inflammation excited, and life destroyed; errors which could never have happened had the practitioner known the value of percussion applied to the abdomen.

Examination of Effusions in the Abdomen.

The mode of determining the existence of fluid in the cavity of the abdomen, was by placing the fingers on one side of the cavity, on a level with, and below the navel, and striking the opposite part with the fingers of the other hand, when a slight shock was communicated to the former fingers, and this was termed *tactus eruditus*, and result is denominated *fluctuation*. This method often gives doubtful results, especially when the fluid in the abdomen is thick, its thinner parts having been absorbed, or when it is effused for months or years, and also when the abdomen is very much distended. In such cases, if the left thumb is placed under the navel, and the left fingers expanded on a level with this part, and inferior to it, and percussion made with the tips of the fingers of the right hand, a sense of fluctuation will be felt, though not appreciable by the former or ordinary method. The same result is found on using the right thumb, and making percussion with the tips of the fingers of the left hand. This method, however, occasionally fails.

M. Tarral has proposed a method which he terms peripheric fluctuation, but one long adopted in this country. It consists in applying the hand or index finger on the lower part of the side of the abdomen, and making percussions with the other hand or index finger on the surrounding parts. During the impulsion, the immobile hand or index finger receives, as by the first mentioned method, the shock or sense of fluctuation. This method may also give obscure results.

Mediate percussion, more especially that with the plessimêtre, enables us not only to verify the presence of fluid in the abdominal cavity, but even to determine its level.

It is at the umbilical region or navel that the exploration is to be commenced. If there is an effusion into the cavity of the peritoneum or abdomen, (ascites, abdominal dropsy,) that is between the intestines and the anterior wall or surface of the abdomen, and if the intestines are distended with gas or flatulence, they float or swim on the fluid, an account of their specific gravity being lighter, and assemble at the highest part of the abdomen, whether the body be in the erect or recumbent (lying) position; and in either case the umbilical region gives the tympanitic sound on percussion.

This sound will persist round the naval according to the height of the level of the fluid. To determine this level accurately, it is necessary to percuss the superior part of the abdomen slightly.

A gentle percussion when the plessimêtre is placed over fluid, yields the dull sound, and sometimes the humoric on account of the shock of the liquid against the intestines. If on the contrary, the percussion be forcible, the vibrations are communicated to the intestines, produce the clear sound notwithstanding the presence of a small quantity of fluid.

Below the level of the fluid, the mass of liquid becomes dense and deep, and the dulness of sound increases proportionately.

After having marked with ink or nitrate of silver the point of passage of the clear sound to the dull sound or humoric, all round the umbilicus, we shall have an exact idea of the superior circumference, or of the level of the fluid.

This examination repeated daily, will verify with mathematical precision, the progress of the malady.

We should also change the position of the patient in exploring the abdomen, and will find the dulness of sound according to the position of the fluid.

When the fluid is inconsiderable in quantity, it is recognised with more difficulty by one of the two following methods:—

We have already observed that the cœcum always affords the tympanitic sound in the normal condition. When, therefore, we presume there is only a slight effusion, the patient should be advised to lie on the ileo-cœcal region, and if in this position, the tympanitic sound no longer exists in this region, the presumption will be changed into certainty, or the patient may be placed on his knees and elbows, so that the abdomen will be the most dependent part, and in this postion the fluid descending on the umbilical paries or wall, will occasion a dulness of sound which does not exist in the normal condition.

In some cases of abdominal tumefaction, it is very difficult to form an accurate diagnosis. Thus the whole abdomen may be distended by a solid mass or tumour, and it is doubtful whether

this be attributable to enlargement of the uterus, ovary, liver, spleen, or the various other anormal productions which have been found in the abdomen. There is a woman who resides at Pimlico, now a patient of mine, at the Western Dispensary, whose abdomen is as much distended as if she was in the last month of pregnancy, and every part of it affords a dull sound on percussion. She gives a very unsatisfactory account of the history of her disease; and the diagnosis is therefore doubful. In other cases, we readily detect solid growths, gas and fluid in the same abdomen; a remarkable instance of which I lately saw, with Mr. Richards of Newcastle Street, Strand, and have met with many other cases, which I need not mention at present. It must be manifest from the preceding account of auscultation and percussion, that both are of vast importance in enabling us to detect a vast number of diseases in the chest and abdomen, and that they ought to be studied by every medical practitioner.

CARDITIS ACUTUS ET CHRONICUS.

Corvisart first described carditis or inflammation of the muscular and intermuscular cellular tissue of the heart. He maintained that inflammation of the muscular tissue alone scarcely ever existed, an opinion since very well verified by M. Bouillaud. This distinguished author adduces analogical proof, that the different tissues of the respiratory and other organs are simultaneously inflamed. He very properly observes, that it will be impossible to appreciate correctly, the history of inflammations which similtaneously affect the anatomical elements of an organ, if we do not know the history of inflammation of each of the tissues that compose it.

Corvisart concluded, that general inflammation of the heart had been observed; while Laennec has added, that examples of partial inflammation, characterised by the existence of an abscess or ulceration in the parietes of the heart, were much more common and more accurately described.

Ramollissement, or softening of the heart is a consequence of carditis (Corvisart, Bouillaud) though some consider it a disease, sui generis, (Laennec), while others are of opinion it may be produced by putrid decomposition.

Ramollissement, suppuration, ulceration, perforation of the cardiac parietes, and induration, are consequences of carditis. Gangrene of the heart has not as yet been described, though the possibility of its occurrence cannot be doubted.

M. Bouillaud gives the histories of eight cases of carditis terminated by ramollissement and suppuration. The first case was that of a man aged 67 years, who complained of pain in the left side of the chest, dyspnœa, feeble, irregular, and intermittent pulse; delirium. Death took place on the seventh day from the invasion of the pain in the side. There was purulent effusion in the left pleura and in the pericardium. The heart was soft and flaccid, easily reduced to a kind of bouillie by the slightest pressure, with infiltration of a greasy matter between the fleshy fibres, and the development of a very evident blush of vascularity.

The second case was that of a man aged 27 years, who had partial effusion into the chest, slight fever, dyspnœa, and infiltration of the lower extremities. Death occurred two or three months after the effusion. There were adhesions in both sides of the chest, an albuminous exudation on the pericardium, and a brownish ramollissement of the tissue of the heart.

The third case was that of a woman aged 36 years. Her symptoms were those of organic disease of the heart, which succeeded three attacks of acute articular rheumatism. She was seized with symptoms of acute carditis with dyspnœa, lipothymia, &c. She died in seven days from the access of the attack. The heart was voluminous, soft, and flaccid, with three or four abscesses in its substance, with a blackish redness, and a sanious pus in the substance of the auricular appendage. There was cartilaginous thickening of the mitral valve, with contraction of the left auriculo-ventricular orifice.

The fourth case was that of a man aged 58 years, who labored under rheumatism complicated with carditis. Death was sudden. There were purulent deposits on the parietes, pillars, and on the partitions of the heart.

The fifth case was described by Dr. Latham. The patient died of carditis. All the heart was of a brownish red color, its substance was softened here and there, and when the ventricles were incised, innumerable drops of pus were observed on the muscular fibres.

The sixth case was that of a young man aged 19 years. His disease was variola succeeded by abscess, and probably by phlebitis. He died on the fifty-fifth day. There was an encysted abscess,

the size of a filbert, in the tissue of the heart.

These cases presented the symptoms common to pleuritis, bronchitis, pneumonia, and other diseases of the lungs; and would be mistaken by all practitioners unacquainted with auscultation and percussion. I have almost daily opportunities of observing cases of pericarditis, carditis, endocarditis, and the consequences of these complaints, which have been considered diseases of the respiratory organs, and treated accordingly, but of course without success. It is important to state that children of twelve years of age are subject to the cardiac diseases now mentioned, as well as adults.

M. Bouillaud gives the histories of four cases of carditis, succeeded by *ulceration, perforation,* and *rupture of the parietes of the heart,* and of *the interventricular and interauricular partitions, of the valves, tendons, and fleshy columns.*

The first case was that of a delicate man aged 79 years, who had been a long time subject to frequent fits of syncope and great irritability of temper. He died suddenly, and there were ulceration and rupture of the left auricle.

The second case was that of a child aged twelve years and a half. Here were signs of organic disease of the heart with obstruction to the circulation for five months and a half; the respiration was difficult, and death was caused by suffocation. The morbid appearances were hypertrophy and dilatation of the heart, perforation of the interventricular septum at the origin of the pulmonary artery, erosion and destruction of one of the valves of the aortic orifice.

The symptoms during life were, swelling of the face, violaceous colour of the lips, infiltration of the superior and inferior extremities, dyspnœa, and a very remarkable sound in the heart; the pulse was regular, but small, feeble, and very easily compressed. There were frequent fits of palpitations, during which a sense of suffocation was imminent. The patient could not remain in the horizontal position; he was obliged to sit, and bend the body forward.

I have seen two cases of boys of ten years of age, in which there were signs of organic disease of the heart; and others of girls of twelve and fourteen years, whose diseases were ascribed to pleuritis. In all, the impulse of the heart was greatly increased; the respiration interrupted, and more or less laborious; the countenance pale, bloated, and anxious; and the lips of red or violet colour.

The third case mentioned by M. Bouillaud was that of a young man aged twenty-four years. He had none of the symptoms of aneurism of the heart or of the blue disease. He died of a febrile complaint at the end of six weeks. There were perforations of the septum of the heart, with communications of the four cavities between each other.

The fourth case was that of a young woman aged twenty-two years, who died of phthisis. There was rupture of a fleshy column of the right ventricle, and there was a whitish clot, as if contained in purulent matter.

Similar cases of ulceration and perforation of the heart were described by Benevenius, Dulaurens, Riviere, Borrichius, Bonnet, Senac, Morgagni, Peyer, Graetz, Corvisart, Laennec, and others.

Observations on Ulcerative Carditis, with the formation of an Aneurismal Cyst, or Aneurismal Tumour of the Heart.

Walter, Baillie, Zannini, Breschet, Berrard, Cruveilhier, Dance, Reynaud, Petigny, and Choisy have observed examples of the disease now mentioned; and M. Bouillaud has narrated the histories of four cases lately observed by him. The symptoms were inexpressible agony and anxiety, respiration very laborious and interrupted, though the chest resounded well in its whole extent. One patient complained of violent pain in the region of the stomach and liver. The pulse was small, contracted, feeble, and frequent. There was a tumour almost as large as the heart itself at the superior and lateral part of the left ventricle, containing dense sanguineous concretions, and communicating by a large opening with the cavity of the ventricle. The pericardium adhered to the external surface of the tumour. The heart of Talma, the celebrated tragedian, afforded an example of the disease under notice. There was a communication between the inferior part of the left ventricle and an aneurismal pouch. Three other cases are detailed by M. Bouillaud.

Observations on Carditis terminated by Induration.

Induration rarely occurs after simple carditis, but is generally observed after pericarditis and endocarditis. M. Bouillaud never met with it, unless connected with the two diseases last mentioned.

Albertini observed a case of ossification of

one of the auricles. Corvisart observed the substance as hard as strong leather, and the apex of the heart cartilaginous. Burns found the tissue of the ventricles perfectly ossified, so as to resemble the bones of the cranium. Renauldin reported a case to Corvisart of petrification of the heart; and M. Broussais found the organ indurated and like a cocoa nut. M. Bouillaud met with cases in which the fleshy columns and substance of the heart were fibro-cartilaginous in patients from the age of thirty to fifty years. This author describes ramollissement of the heart as characterised by the same phenomena as that of the brain, lung, &c., and considers it totally different from suppuration. He next gives an account of ulceration of the heart, with or without the formation of an aneurismal cyst or perforation. He agrees with Corvisart and Laennec, that it is impossible to distinguish carditis during life; and he states that he always found it complicated with pericarditis and endocarditis. He is not acquainted with any sign pathognomic of carditis alone. He observed the inflammatory ramollissement of the heart in persons affected with essential or idiopathic fevers, and he thinks this accounts for the extraordinary frequency of the pulse which often exists during the convales cence of these fevers. He judiciously concludes that inflammation of the endocardium would be sufficient to produce the phenomena.

There are no positive diagnostics of simple ulcerations or abscesses of the heart, nor of perforation of the organ, unless the sudden death of the patient. Even this event does not invariably happen.

A perforation may occur in the interventricular or interauricular septum, not only without causing death, but even without inducing any violent symptom. In no case, in eighteen, of false consecutive aneurism of the heart, was the disease detected during life. It is, therefore, extremely difficult, even by auscultation and percussion, to establish the diagnosis.

The causes and treatment of acute and chronic carditis, are precisely the same as of pericarditis and endocarditis.

Inflammation of the celluo-adipose tissue of the heart has not been described by any author on the diseases of the centre of the circulation. M. Bouillaud is disposed to think, that the encephaloid cancer of the heart is nothing but a diseased secretion of the tissue just mentioned. He also maintains that cartilaginous, osseous, and calcareous productions are observed in early life, and are preceded by inflammation. He combats the conclusion that these degenerescences are confined to old age, as he has found them absent in persons of eighty years. It appears probable, in his opinion, that the perpetual friction to which the valves and the arterial parietes are subjected, is really a physiological or functional condition which ought not to be neglected, as it determines all the circumstances favourable to the development of cartilaginous, osseous, or calcareous indurations of these parts. Everyone knows that pressure and friction on certain parts, as the hands and feet, will cause different kinds of indurations; and this explanation is much more satisfactory than the vague notion that old age produces ossifications or indurations.

Cancer and Tubercles of the Heart are of comparatively rare occurrence, and have been accurately described by different authors mentioned by M. Bouillaud. He is disposed to consider these morbid growths as the result of inflammation.

Hydatids or Serous Cysts have been found in the heart, and described by numerous authors. Such productions are, however, of very rare occurrence. The origin of these cysts is as yet undetermined. Hydatids have been found in every tissue in the body, and in many organs simultaneously.

Contribution to the Pathology of the Heart. By Thomas Sanders, M.D.

It is not unfrequently remarked that the sounds of the heart are distinctly heard at a considerable distance from the patient. I observed this in May, 1831, in a boy ten years of age, who had long laboured under an organic affection of that organ. They were very distinct when the palpitations were violent, but scarcely perceptible when the action of the heart was calm. He was opened on the 6th June. The heart was enlarged, and intimately united to the pericardium by coagulable lymph.

About the same time I visited an old lady who had long suffered under a similar complaint, and seemed fast approaching "the bourn whence no traveller returns." She presented the same peculiarity in the sounds of the heart; and here also they were distinctly observed only when the palpitations were strong. The body was examined on the

18th June. The heart was enlarged to about three times its natural volume, and its whole surface adherent to the pericardium.

I noted the coincidence in both cases, but my attention was not again directed to this phenomenon till December, 1835, when I was requested by a medical friend to inspect the body of a young man, twenty-three years of age, who had long been affected with præcordial disease. The heart, which was enlarged, and the pericardium were firmly united. I said that I regretted not having seen the patient, since from what I now saw, I suspected that the beating of the heart, when strong, must have been perceptible at a little distance from the body. I was then informed that such had been the fact; that it was distinctly heard without applying the head to the chest.

Laennec, vol. ii. p. 455, speaking of this symptom, says—"Je n'ai vu succomber aucun des sujets qui m'ont présénté ce phénomène, ce qui, joint à sa liaison frequente avec une agitation nerveuse momentanée, et avec le bruit de soufflet, et le fremissement cataire, doit faire penser qu'il est peu grave en lui-même."

"Je n'ai, d'après ce que je viens de dire, aucune certitude relativement à l'état des organes de la circulation auquel il peut être dû; mais plusieurs motifs me font croire qu'il est dû le plus souvent à *une exhalation gaseuse plus ou moins abondante dans le pericarde.*"

I do not understand on what principle of acoustics such a supposition could be founded, even if the facts stated did not sufficiently controvert it. Laennec himself makes an observation afterwards, which, in my opinion, is equally conclusive. He notices the intermittence of the phenomenon and its sudden appearance after violent exercise.

From the cases related, I would be inclined to believe that it depends on the heart's action being increased, and on the heart and pericardium cohering, and thus communicating the sound. This is a simple deduction from the symptoms and from the appearances on dissection; it can readily explain the intermittence and sudden appearance mentioned by Laennec; and aware as I am that one or two facts do not warrant generalization, I present this as a supposition which altogether depends on future observation for its confirmation.

Edinburgh, Dec. 7th, 1836.

OBSERVATIONS ON THE NATURE AND TREATMENTT OF LUPUS.

By Alexandee Ure, M.D., M.R.C.S.
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[Press of matter obliged us to omit this paper in our last.]

In the following observations, which I have the honour to submit to the profession, upon the nature and treatment of lupus, it is my intention to confine the application of that term, often vaguely and indiscriminately used in nosology, to two varieties of erosive ulcer. One seated in the proper structure of the skin, the *dartre rongeante scrofuleuse,* of M. Alibert; the other in an accessory part of the cutaneous organ, the *dartre rongeante idiopathique,* of the same author. Proceeding in this manner, I hope farther to show, that those two, although resembling each other in many respects, yet differ in others, and, consequently, require certain modifications of treatment, which have not heretofore met with due attention.

Neither variety can be regarded in the light of a malignant affection, for the reason, that adjacent parts and organs are influenced not by absorption, but simply by contact.

An affection, designated by some pathologists *lupoid tubercle,* developed at an advanced period of life, I am disposed to consider as one of a malignant type; yet bearing the impress of malignancy in an inferior degree, because implanted in a substance endowed with a low grade of vitality. It is, in fact, what I have elsewhere described as the primary cancer of the skin—the cancer of the cutaneous glandular texture, adverted to by M. Breschet, in his admirable Memoir*. On this account I decidedly protest against such misapplication of the word lupus.

Lupus exedens, or eating tetter, has been defined a tubercular disease, inducing ragged ulceration of the skin. Dr. Bateman, in his Synopsis, has touched very lightly upon it, and assigns as a reason, that he can mention no remedy which has been of any essential service in the cure of it.

To portray the amount and intensity of its depredations, analogous to the gnawing of some voracious animal, or the ravages of some insect, the epithets *lupus vorax, formica corrosiva,* were bestowed upon it by the ancient medical writers. By

* Nouvelles Recherches sur le Structure de la Peau. Paris, 1835.

the Greek translators of the works of the Arabian physicians, it is described as the ερπης εστιομενος, corresponding to the Latin *herpes exedens*. In France it is called *dartre rongeante;* in Germany, *die fressende Flechte.*

The common locality of lupus is some portion of the face. I have, however, seen it attack the nates; and M. Alibert mentions an instance of its occurring on the breast. A remarkable circumstance connected with it, is that of its being usually solitary, confined to a single point of the integument; there, all its virulence seems concentrated.

I. *Erosive ulcer of the derma.* This form is by no means infreqnent. It attacks both sexes indiscriminately during childhood and adolescence. At the period of life when there exists the greatest predisposition to affection of the cutaneous and glandular systems.

The individuals most liable to suffer from this particular ulceration, are those of a fair, occasionally rosy, complexion, with light or auburn hair, grey or blue irides, and a tender skin. To a superficial observer, the general health seems unaffected; but on minutely investigating the state of the different functions, more or less derangement will, in the majority of cases, be detected in those of the chylopoietic viscera. The tongue is redder than natural, especially along the margins and towards the extremity; its central portion presents a cream-coloured fur, through which the red papillæ project—the breath is more or less offensive—the evacuations from the bowels irregular and unhealthy. To these we may find superadded other signs indicative of strumous dyspepsia—an affection well described by Dr. Clark, in his Treatise on Consumption,

From the survey of a considerable number of cases of this variety of erosive ulcer, I am led to coincide with those authors who look upon it as a symptomatic affection. It is generally dependent on some disordered condition in the functions connected with assimilation and nutrition. If, indeed, ever truly *localized*, it has either been preceded or accompanied, during some period of its course, by unequivocal marks of those errors of function to which allusion has just been made.

Dr. Macfarlane, in his valuable Clinical Reports, mentions, that, in Glasgow, during the years 1818 and 1819, when the working classes were exceedingly ill fed, he had occasion to see a greater number of cases of lupus among the district poor under his charge, than at any former or subsequent period.

According to M. Rayer, it has been at times extremely prevalent among the indigent in some parts of France, particularly the sterile, mountainous regions of the Haute Auvergne, from scanty and unwholesome nourishment.

The affection is seated in the dermoid texture; and judging from the nature of the secretion emitted after ulceration is established in the glandular body, secerning that mucus, which, according to M. Breschet, becomes, at a later period, the *horny* matter*. On attentively examining the process set up prior to the ulcerative absorption of the epidermic layers, the following phenomena will be remarked. In some point of the attenuated and delicate integument investing the nose, cheek, or lip, a minute yellowish speck appears, surrounded by a reddish halo. The point of the skin corresponding to this tiny abscess, believed to exist in the muciparous apparatus, is removed by absorption. A mode of ulceration is at length established which is generally superficial, not extending beyond the derma; and though accompanied with preternatural redness, yet rarely with any swelling of surrounding parts. It is characterized by its ragged edges on a level with the base; by its pale mamillary surface, whence issues that peculiar secretion which rapidly concretes, on exposure to the air, into greyish yellow crusts; and, lastly, by its being the seat of hot smarting pain, and occasional pruritus. The furfuraceous crusts are soon detached, and fresh ones reproduced to supply their place; the affection creeping on meanwhile with insidious certainty.

After having subsisted for some time, the original type of the disease is modified, and in some measure obscured; the surface acquires a pink, glassy aspect, and loses the papillary appearance it originally presented. When situated in a part where there is much loose cellular substance, the immediately adjacent textures become indurated, condensed, and assume a dusky red or purplish hue.

Ulcers of this kind differ extremely one from another in their degree of virulence. If the nose is primarily invaded, and particularly the inferior portion of the septum, as frequently happens, the ulceration advances by imperceptible steps, corroding and consuming every

* Op. cit.

tissue, muscle, cartilage, down to the very bone, which at times participates in the devastation. The mutilation thus produced is often hideous and irreparable.

That this is not purely a local disease seems further ascertained from the obstinacy with which it resists topical agents. I have seen nearly every description of stimulant tried, and myself employed the most powerful caustics, but never have known any permanent benefit accrue, unless measures have been conjointly taken to modify the state of the system at large. I adduce the two following cases to demonstrate the comparative inefficacy of severe escharotics, even where an extensively varied treatment had been pursued.

St. George's Hospital, May 1836.—Anne Paisley, aged 15, auburn hair, greyish-blue irides, tolerably healthy complexion, gives the following history of her case.

Between five and six years ago, she discovered a small hole in the lower part of the partition of the nostrils, which was constantly covered by a little dry scab. It occasioned no uneasiness. For twelve-months previously she had suffered pain in the back part of the head. At that period she was living with her parents in the country. Desirous to be rid of this crust within the nose, she consulted a physician, who prescribed tonic medicines; which were accordingly persevered in for a considerable time without any good effect. After remaining in this comparatively indolent state for a couple of years, the affection at length extended to the exterior surface of the nose, in consequence of caustic having been applied by a surgeon in town. Since then the ulceration has slowly advanced without intermission. The greater part of the nose, including cartilaginous septum, is gone. The ulcerated surface, irregularly disposed, corresponds in character with the description above assigned, and is the seat of heat and smarting.

Has been for several months past a patient here, of Mr. Caesar Hawkins, who has left hardly any plan untried which science could suggest, as the disease seemed to baffle every sort of treatment, Mr. Hawkins determined to prove the effect of my preparation of the chloride of zinc.* It was accordingly applied from time to time during the months of February, March, and April, to the nasal ulceration, and likewise to two ulcerated spots which had formed near the centre of each cheek. Water dressing was applied to the eschar and to the subsequent surface in order to give the caustic a fair trial. Each application was attended with the most lively pain, and some inflammatory infiltration of the adjacent cellular texture. But the nature of the sore had undergone a change. It put on a sound appearance and speedily healed. The cicatrization however was only partial, and in some places temporary.—The disease still pursues its eroding course.

A little boy was sent to me in the spring by Mr. Duffin of Foley Place, for a similar affection to the above, occupying about one-half of the outer surface of the nose, and extending to the cheek of the same side. Beyond, were traces of the *membranous cicatrice* denoting the previous existence of the same kind of ulcer; and which I was informed had been healed by a skilful employment of strong nitric acid. There was a degree of ectropion referrible to the puckered contracted condition of the adjoining

* The preparation of the chloride which I proposed and introduced into practice in this country, differs in a most important feature from that originally employed by M. Canquoin. The wheaten flour prescribed in the French formula is apt to envelop the chloride in a glutinous dough, which blunts its power, or at any rate tends to confine its action to the particles on the surface of the paste; but the anhydrous gypsum of my formula, while it can exercise no chemical action upon the chloride, forms a porous medium through which the whole particles of the deliquescent chloride may transude upon the morbid or albuminous tissue, with the effect of decomposing or destroying it with certainty to any definite depth. This preparation of mine has been adopted in several of the London hospitals, and has been found to be unfailing in its escharotic powers. It was probably owing to the counteraction of the vegetable *farina* that M. Sauson, the distinguished surgeon of the Hotel Dieu at Paris, failed last year in the application of the paste—a fact communicated to me by M. le Doct. Nonat, in a letter dated Paris, August 3, 1835, of which the following is an extract. "Je sais que M. Sanson en fait usage dans les cas du Cancer du sein, et que jusqu'ici il n'en est pas satisfait. *Adhuc sub judice lis est.*"

The new, and I believe, important fact in animal chemistry of the action of chloride of zinc upon albumen, to which I now add that of the nitrate of zinc first observed and stated by me; and the consequence deducible relating to the morbid albumen of cancer are peculiarities also to which I lay claim.

integument; the tongue presented the red dots on the grey fur; the boy had in addition a porriginous eruption on the scalp. In compliance with that gentleman's request, I applied a thin stratum of the gypsum paste, the same as in the preceding case. Here the result was equally unsatisfactory, for the amendment was but of brief duration.

It is thus demonstrably evident, that the more powerful escharotics, are inadequate to effectuate a radical cure of the affect on in question, so long as the constitution is at fault. For no sooner has the effect of the escharotic subsided, than by a reflex action, the sympathetic disease of the skin is again called into activity.

In the above cases the action of the remedy was to suspend for an interval that morbid equilibrium subsisting between internal and external surfaces. But no sooner had that ceased to influence, than the still existing though latent general cause resumed its ascendancy.

An opinion is entertained by some medical men that this species of lupus must run a certain course, or exhaust itself, ere its career can be put a stop to, by any method of art. This is based however, rather on imperfect truth, than on fundamental error. When the disease is long left uncontrolled, a morbid habit is superinduced which ordinary means fail to eradicate. But if measures be taken at an early stage to alter that peculiar condition of the system upon which the ulcerative process seems to depend, or with which it is associated, we have every reason to expect that that course will be materially abridged, and much disfigurement and mutilation prevented.

Now the chief indication is to correct the state of the digestive organs, and invigorate the system, by a proper regulation of diet, residence in a pure air, free out-door exercise; duly attending to the state of the cutaneous exhalation, and alvine evacuations. Much benefit will be obtained in most cases by substituting for a too stimulating animal diet, one composed of farinaceous articles and milk. The patient must strictly abstain from fermented liquors, and have occasional recourse to bathing, and gentle laxatives. Various alterative and tonic medicines, such as arsenic, mercury, iodine, sarsaparilla with alkalis, steel and sulphate of quina, will each in its turn, according to circumstances, constitute valuable auxiliaries.

When a visible amelioration is perceptible in the general condition of the patient—when the different functions are all properly performed, then is the most favourable time for resorting to those topical remedies which act, not as caustics, but as powerful alteratives of the organic relations of the part. Among these arsenic claims the preference. Sir E. Home, was in the practice of employing an aqueous solution of the white oxide of arsenic, arsenious acid. Dr. Macfarlane likewise advocates the use of the arsenical solution, because he has never known it produce local mischief or constitutional disturbance. His formula prescribes six grains to the ounce of distilled water.—I can from experience attest its efficacy. The favourite application of Dupuytren was a powder consisting of one part of arsenious acid, in ninety-nine parts of calomel.

A topical stimulant of acknowledged utility in interrupting the progress of lupus is the red-hot iron. It often exerts a most salutary effect in modifying the nature of the sore, producing healthy granulation and prompt cicatrization. Among other metallic stimulants, the solution of nitrate of silver deserves a place. M. Canquoin, in his work on cancer, speaks of the chloride of antimony as a veritable specific for the *dartre rongeante*. He advises it to be used in the following way. Let the whole extent of the affected part be touched with a pencil imbrued with the chloride. About a couple of minutes after, the pain thus produced is to be allayed by laying on compresses dipped in cold water. In this way the active chloride is at once transformed into an innocuous subchloride. This operation is to be repeated once every ten days, until the sore heal. Some of the German surgeons recommend the immediate application of the corrosive sublimate. The inconvenience however, with which its absorption into the system is fraught, must restrict its use to cases of very limited extent. I already noticed the nitric acid. Before resorting to topical measures it is in every instance expedient to remove the crusts by means of emollient poultices. If there be much pain and heat about the sore, cold poultices ought to be employed till these subside. It is sometimes advantageous to add some narcotic solution to the cataplasm.

The stability of the cure may be inferred from the character of the cicatrix. When the new skin is soft, free from tenderness, and nearly of the natural

colour, it may be considered sound. But when it remains preternaturally red and indurated, or on the other hand presents a delicate membranous aspect, like an *arachnoïd* web traversed by minute tortuous blood vessels, there is every likelihood of relapse. Under such circumstances, it is incumbent on the patient to persevere in the therapeutic means above proposed. For it is only by repeated applications and unremitting attention that a cure can be accomplished.

This disease sometimes yields to the administration of internal remedies alone; sometimes, again, it spontaneously cicatrizes. Dr. Trüstedt, of Berlin, mentions his having cured lupus by means of the decoctum Zittmanni (a compound, preparation of sarsaparilla, slightly purgative), spare diet, warm baths, and the subsequent exhibition of sarsaparilla by itself*. This practice is similar to that recommended by Rust, one of the principal surgical authorities of Germany†.

II. *Erosive ulcer of the follicles.*—This frequently originates like a catarrhal affection of the schneiderian membrane. By and by, the inflammation being, as it were, concentrated in one particular point, leads to erosive ulceration, which almost invariably terminates in perforation of the cartilaginous septum. The only circumstances whereby the patient's attention is directed to the mischief going on, are a degree of tenderness and fulness in the membrane, felt more especially on exposure to cold air, and the constant reproduction of crusts on the point of lesion. After a time, from cold or other determining cause, some portion of the external surface of the nose becomes inflamed and ulcerates. One or other ala, by continuity of tissue, is commonly attacked. Small, red, angry looking tubercles make their appearance, and are speedily converted into a spreading ulceration. The ulcer all along preserves the tubercular character; the apices of the tubercles are more or less concealed by dry, hard, tenacious crusts‡. As the disease proceeds, fresh tubercles are developed, and encroach more and more upon the healthy integument. The confines of the sore have a dusky red hue. This ulceration is always attended by loss of substance, and the havoc committed by it when unrestrained often very great. The parts ordinarily destroyed are the cartilaginous septum and ala. According to M. Rayer, it may begin externally, and spread to the lining membrane of the nostrils secondarily. The disease, as stated by Sir A. Cooper, consists in ulceration of the sebaceous follicles. Hence, whenever the pre-existing irritation passes along from the internal mucous cryptæ to the external ducts, the ensuing inflammation induces occlusion of the orifices, succeeded by ulcerative absorption of the follicles. The papillæ, endowed with a higher degree of sensibility, and a greater capacity for resisting the process of disorganization, may now and then be recognized forming little vascular eminences. Are we to ascribe to this circumstance the undue sensibility of the morbid surface to the impression of stimuli?

The present variety of corroding ulcer is seldom met with before puberty. It begins most frequently between the ages of fourteen and thirty; rarely after the fortieth year, although M. Alibert has adduced cases where it occurred at a later period in life. As with the former, so also with the present form of lupus, the subjects chiefly predisposed are those of a blond complexion, with light hair and irides, and unusual development of the sebaceous follicles of the nose. The latter feature may be said to characterize and accompany this sort of ulcer. Although the phenomena of strumous dyspepsia are absent here, yet the patient is seldom of a robust constitution—he feels languid, most usually labours under symptoms of indigestion, has what is commonly termed a "weak stomach." Nor does he display the clear and blooming complexion indicative of health and vigour.

As respects the intensity of its progress, we observe great variation. In one individual its course is so slow as to seem almost stationary, while in another it runs on with rapid strides.

In combating this form of ulcer, so obstinate and intractable in its nature, it is indispensable towards restoring a healthy action, that we should not only destroy the morbid habit of the part, but at the same time modify the organic relations of subjacent textures. This done, the lesion will spontaneously heal. Now this twofold object can be at once accom-

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* Med. Zeit. F. Heilkunde, in Preussen, No. II, 1833.

† Aufsatze u. Abhandlungen, Berlin, 1834, p. 377.

‡ According to Vauquelin, who subjected them to chemical analysis, the crusts consist of albumen, some animal mucus, and salts.

plished by employing the chloride of zinc paste abovementioned. In very superficial cases, a solution of the nitrate of zinc in strong nitric acid answers the same end*. This combination resembles in therapeutic action the chloride, but is less energetic. I prefer it to the *nitrate acide de mercure*, recommended by MM. Recamier, Jules Cloquet, and Velpeau. One or two applications of the *paste* will at most suffice. So soon as the eschar is detached, the healthy sore is to be treated with water dressing; or if there be much unevenness of surface, with narrow strips of adhesive plaister. These ought to be symmetrically disposed, and not interfered with until they drop off. Great circumspection must be observed in using this powerful remedial agent; for injudiciously employed, it may on one hand produce a dangerous degree of erethism, on the other, only irritate the sore and exasperate the disease.

Although internal remedies are here of minor importance, still the permanence of cure will be confirmed by a judicious application of the hygienic and therapeutic precepts formerly laid down. A milk and vegetable diet, by rendering the blood less stimulating, exerts a remarkable influence upon the state of the cutaneous capillaries. This is exemplified by the fact, that nothing tends more than such a diet to subdue that capillary congestion—that turgescence of the follicles—and also to diminish that morbid oily secretion of the skin, which may accompany or follow this affection.

There is one symptom we are generally called upon to treat, as a concomitant or sequela to the ulcer. Namely, a sense of tenderness or rawness of the pituitary membrane, depending on chronic inflammation. It is allayed by protecting the part against external impressions, and especially that of cold, by plugging the nostrils with charpie, or the fleecy down of finely carded cotton wool. When the irritation has persisted for a period of years, and is attended with superficial ulceration of the mucous membrane, some astringent lotion ought to be thrown up once or twice every day. I have prescribed with advantage the following liniment, used by M. Canquoin for cancerous sores:—

℞ Ol. Oliv. ʒj.
Zinci Chlor. gr. xv. M.
Fiat Linimentum.

The affected part is to be pencilled over with the liniment once a day. In the course of a few weeks, by pursuing this plan, the membrane will be restored to a sound condition.

I subjoin the following cases, in order to illustrate the practice above described.

Case 1.—E. C. Deady, aged 21, of a fair complexion, light hair, greyish blue irides. I saw her on the 18th February last, by the request of and along with Dr. Roe, under whose professional care she then was.

Right ala nasi was the seat of erosive tubercular ulceration of the follicles. There was an inflammatory blush round about the sore, which was covered over with furfuraceous crusts, and the source of smarting, pricking, and occasionally shooting pain. The septum was perforated by a large aperture.

The affection commenced some years previously, inside of the cavity of the nostrils, and had progressively spread to the ala.

She had consulted many medical men, and tried a vast number of remedies, with the view of getting the sore healed, but in vain.

It having been agreed to apply the chloride of zinc, a thin layer of the gypsum paste was accordingly laid over the sore. No sooner had the eschar separated than the ulcer began to heal, and within fifteen days was completely cicatrized. For some time subsequent she took the decoction of sarsaparilla, by the advice of Dr. Roe. She now enjoys the most excellent health; the cicatrix is firm, white, and solid, and the redness of the apex has long since vanished.

Case 2.—Wm. Blake, aged 22, clerk, light hair and blue irides. The sebaceous follicles strongly developed on the surface of the nose.

I was asked to see him last spring, by Mr. Pettigrew, under whose care he was, on account of an erosive tubercular ulceration of the left ala nasi, which was in part eaten away. He gave the following history of the case.

About seven years since he was attacked with a distressing tenderness of the nostrils; soon after, the partition ulcerated. The ulcerative process continued

* Procured by dissolving one to two drachms of the fused nitrate of zinc in an ounce of aquafortis. The fused nitrate is, like the chloride of zinc, a powerful escharotic. I have produced, with a thin layer of a paste composed of it and gypsum, in the space of seven hours, an eschar about three lines thick; considerable pain and swelling accompanied its action. It is much less deliquescent than the chloride.

for five years; it has destroyed the greater portion of the septum. Four years ago, a crop of pimples came out upon the side of the nose, in which originated the present ulcer. There is a deep redness all round the sore. Has tried numberless remedies, internal as well external, but without benefit. Among others, iodine and sarsaparilla, which, without meliorating the local disease, have deteriorated his general health. Complains of increased sensibility of the lining membrane of the nostrils, aggravated on exposure to draughts of cold air. The chloride of zinc was applied to this most refractory sore, and the result of that application has been a permanent cicatrix.

I saw this patient within the last few days. The exterior of the nose remains perfectly sound, and the morbid irritability of the pituitary membrane is subsiding under the use of a milk diet, conjoined with the topical means described while treating of this particular symptom.

Case 3.—Mrs. M * * *, residing at Westbourn Green, Bayswater, came to consult me for a corroding ulcer on the nose, by the recommendation of Dr. Roe. She is 32 years of age, the mother of a family, has chesnut coloured hair, and grey irides. She informed me that the ulceration, which has the marked tubercular character, was referrible to an affection of the inside of the nose, attended with formation of scabs, that began like a cold upwards of two years ago. For in less than a year from that date, a little scab made its appearance on the left ala, accompanied with some inflammation Leeches and poultices were applied, and a variety of internal remedies exhibited; and to the irritation caused by a single leech-bite, she ascribes the formation of the present sore. The ulcer consists of a group of irritable looking tubercles, covered with crusts, and accompanied with a dark red hue of the adjacent integument. The cartilaginous septum is perforated, and a portion of the ala destroyed. Beneath the crusts she feels a constant itching, which changes to a sense of heat and smarting on their detachment. Her general health is indifferent. The sebaceous puncta are unduly prominent on the nose, which presents those minute varicose veins near the apex, named by German pathologists, *hemorrhoidal vessels*.

On the 25th of June, I applied a thin layer of the gypsum paste; in a few weeks after, a healthy cicatrix occupied the site of the ulcer.

She called upon me very recently. The cicatrix remains firm and unchanged. An amendment has taken place in her general health, she tells me, since the removal of the irritation maintained by the sore.

In each of the above cases the loss of substance is inconsiderable, and may be ascribed not to the action of the remedy, but to the previous process of ulceration.

I observe that a case of lupus has been treated with the *pâte de Canquoin*, by M. le Doct. Bureaud Rioffrey, and published along with other cases by him.

KING'S COLLEGE, STRAND.

The foundation of King's College marks an era in the history of London Medical Education, quite as interesting, and equally important, as was the establishment of the London University.

Whilst the joint stock company of Gower Street used every endeavour to gain the countenance and support of the medical profession, by vaunting their liberal principles, and assuring the public, not only that they were to admit students of every religious sect to participate in all the advantages which had hitherto been monopolised by the old universities, being only granted by them to members of the Established Church; but that they were to choose professors entirely from their merit, inviting all scientific men to proffer themselves for chairs; the founders of King's College had the merit of openly declaring principles and sentiments, in direct opposition to those held forth by the founders of the London University.

They, at once avowed their hostility to *all* reform in the constitution of their new college, and they distinctly averred, that our *ancient* institutions should be considered as the model for King's College, and further, that in place of making it a *most liberal* institution, and defrauding the public by words and promises, they publicly declared, that it should be governed by laws founded on *ultra Toryism* in its most extended signification. None but members of the established church were to be admitted within its walls, the students were to be attired according to the monkish habits of our forefathers, half a century ago, and which still disfigure our universities, and the professors themselves were to be chosen only from amongst those who were either members of the Established Church, or who had no objection to *become so*, in

order to render themselves fit subjects for candidates to the chairs.

However jealous the public had good reason to have been of the *liberal* professions of the shareholders in Gower Street, there was an honesty and candour in the *conservative* declarations of the subscribers to King's College, which gave the most favourable impression of their sincerity. There may be an unwillingness in giving credit to professions of liberalism, just as there is in placing faith in professions of honesty and virtue; but no one for a moment doubts that the high minded and aristocratic founders of King's College would rigorously and conscientiously act up to those principles of monopoly and exclusion, which they had so honorably declared!

When the University of London was first talked of, it was viewed by several long-sighted members of the Tory Government, which was then in power, as an engine which ought not to be allowed to remain in the hands of their political enemies, and if they could not in some way or other wrest the patronage of that Institution from the hands of the liberals, they would ultimately have to establish an University in their own defence. These presentiments were realized after the lapse of but a few years, and the fondest hopes of the *aristocrats* in science, were now concentrated in King's College.

Besides the clergy, who affectionately nursed the darling infant, it was hugged by the corruptionists of Lincoln's Inn Fields and Rhubarb Hall, and fondly caressed by the superannuated dowagers of Pall Mall East!

That section of the new College which was devoted to classical education, was entrusted and entirely committed to the tender care and parental solicitude of the Fathers of the Church, whilst the medical chairs were left to be filled up to the good sense, discrimination, and judicious selection of certain eminent individuals, belonging to the ruling bodies of our Medical Corporations, distinguished by the *illiberality* of their principles, the selfishness of their projects, the rapacity of their dispositions, and their devotion to monopoly!

Though under the ostensible patronage of his Grace the Duke of Wellington, who was then Prime Minister, the New College had many difficulties to overcome, in collecting the *sinews of war!* At last, however, a sufficient sum of money was subscribed to embolden the projectors to commence the building, and after a great deal of wrangling and discordant opinions, a site was ultimately chosen in the Strand!

The grand scale on which the College was built, and the capacious theatres which were constructed, will afford a lasting monument, of the sagacity which was bestowed in measuring the success of King's College in public estimation, and how much more they seem to have appreciated the value of a spacious Theatre, than the talents and acquirements of the Professors who were to fill the chairs.

Sir Henry Halford could not more strikingly evince his earnest and fervent desire to promote the interests of the infantile Institution, than by appointing two of his nephews, Drs. F. and B. Hawkins, to most important chairs of the Medical School, the Practice of Physic, and Materia Medica. Mr. Green, much to his future sorrow, was persuaded to quit the old established School at St. Thomas's Hospital, where he had been much esteemed as a teacher. Mr. Mayo was selected for the chair of Anatomy by the advice of Mr. Brodie, and the other chairs were filled up by such individuals as they could select from the scanty store of materials afforded them by their *exclusive* principles.

Notwithstanding every effort which was made by the individuals of the Medical Faculty themselves, aided and assisted by the active co-operation of their dependants, in canvassing for students, the number of hearers bore but a very small proportion to the magnitude of their Theatres, and every succeeding session afforded incontestible proofs that this Institution, as a Medical School, was to be considered as a complete failure. The tempers of the professors became soured by disappointment and vexations, internal discord ensued, and finally, about twelve months ago, an open warfare commenced among them, the effects of which have so shaken the whole of the tottering machine, that as far as the *number* of students is concerned, the massive edifice of King's College, with its imposing name, and with all the patronage which it has received from the highest dignitaries of the Church, and the ruling powers of the Medical Corporations, can only be ranked among the second rate private schools of the Metropolis!

The first open declaration of hostilities was exhibited by a letter from Professor Mayo to Professor F. Hawkins, in which Mr. Mayo boldly avowed, that the disreputable want of success in King's College was entirely owing to Professor Haw-

kins' inefficiency as a teacher, to which letter Professor Hawkins sent for answer a *verbatum* copy of Professor Mayo's own letter, only changing Hawkins for Mayo.

One scene of discord amongst the eminently distinguished individuals of the Medical Faculty of King's College now followed after another. Sir Henry Halford chagrined, mortified, and disappointed with the emoluments and honors which his nephew had reaped, caused Professor Hawkins to retire from the Institution.

Professor Green soon followed the example of Professor Hawkins and resigned the chair of Surgery. Mr. Green had been induced to quit the School of St. Thomas's Hospital by building Palaces, and indulging in prospects, that were never realized. He was dazzled with the magnitude of the building, with its imposing name, and with the *Gee Gaw* of a Professor's Gown! But all his fondest hopes were blasted, and his ardour chilled, when he found himself lecturing to comparatively empty benches, and when the Councils of the College had become a scene of wrangling, discord, and confusion. He had also considered that the want of success in the Medical School partly arose from not having a Hospital attached to it, for clinical instruction, and so zealous was he to promote the welfare of the College, that he absolutely had a scheme of employing a *Steam-Boat* to transport the students from the Strand down the river to St. Thomas's Hospital!

Professor Mayo was now appointed to the chair of Surgery, vacant by the resignation of Ex-Professor Green, and no sooner had this new arrangement been made, than Dr. Jones Quain having resigned the chair of Anatomy at the London University, Mr. Mayo became a candidate for that situation. Having failed in this speculation, the Council of King's College, consistent with the avowedly illiberal principles on which the Institution had been founded, and indignant at the presumption of Mr. Mayo in attempting to procure a more *lucrative* situation than that which he enjoyed at King's College, they *compelled* him to resign his professorship.

We ought not to pass over some extraordinary events which took place on the vacancy of the chair of Materia Medica, as they all afford incontrovertable proofs of the strict adherence which the Council of King's College have never failed to show on every occasion, to the original principles and purposes for which their College was founded. Dr. Bisset Hawkins having received an appointment as visitor of the Prisons, which unfortunately deprived the King's College of his valuable services. As this important event took place suddenly, it was a task of no small difficulty to find a competent Professor to fill the chair, more particularly as neither the number of students nor the amount of Fees made it either a situation of honor or of profit. They were indeed ultimately compelled to get a lecturer from one of the dispensaries, to proceed with the first course, in the hope, that during that period, they might provide themselves with some individual who possessed all the necessary attributes for a King's College Professor. It was universally admitted, that every possible qualification for the chair of Materia Medica was possessed by Dr. Paris, who was accordingly solicited to fill the office; and though it was publicly reported that Dr. Paris had accepted of the honor which was offered to him, those who knew him best, were persuaded that the "Diet and Regimen" of King's College were ill calculated to agree with his constitution and habits.

Towards the commencement of the second course of last session, Dr. Webster who had hitherto lectured on Materia Medica gratuitously, and who, like most of his countrymen, had the good sense to perceive that he was a mere tool in the hands of the Conservatives, employing him only as long as it would suit their own purposes, wrote a letter to the Council, requesting to know, if they had any intention to appoint him to the chair; when he was informed, that as he was a Dissenter from the Established Church, he could *not* be received as a *candidate*, and they were compelled at last to elect Dr. George Gregory, a man who in his own estimation was in every way qualified to fulfil its important duties.

After the resignation of Mr. Green, and the election of Professor Mayo, as the Professor of Surgery, the chair of anatomy became vacant. The Demonstrator, or as he has obtained for himself, the imposing name of Junior Professor, was not considered to possess the necessary qualifications, whilst the pretensions of Dr. Todd were of the most imposing and irresistible character. Dr. Todd had taught anatomy at a very *select* school in Westminster, and he had the credit of being a zealous advocate and supporter of *Ultra Toryism*, monoply, and corruption, and had even gone the

length of giving new names to certain muscles, illustrating their functions on Tory principles. To the sphincter muscles, for instance, he gave the name of *conservative*, whilst he denominated certain elevator muscles *radical!*

However powerful may have been the impressions made by this new nomenclature on the Holy men of King's College, and however imposing may have been his own pretensions, he had still a more powerful influence to assist him in procuring the anatomical chair. It will be recollected, that when a "hue and cry" was raised by the Clergy, that "the Protestant Church was in danger," a public meeting was assembled in Exeter Hall to rouse and excite the public mind, and arrange some plan for the future security of the Established Church! At this meeting a most extraordinary document was read purporting to be the translation of a BULL from the POPE, in which His Holiness spoke very openly his sentiments regarding the Protestant religion, and which sentiments could not fail to create great irritation in a bigotted mind.

It was afterwards discovered that this PAPAL BULL was a mere hoax, and that Dr. Todd's brother was the ingenious author!—a red-hot Tory of high repute in Trinity College, Dublin! Such, however, was considered the essential services of the Rev. Dr. Todd, and so praiseworthy his conduct in the cause of religion on that memorable occasion, they were considered quite sufficient by all those who had the welfare and reputation of King's College near to their heart, to induce them by universal acclamation to elect his brother to the vacant chair of Anatomy,—a small but grateful acknowledgement of the important services and exemplary conduct of the Fellow of Trinity College, Dublin!

ANGLICUS.

COURSE OF STUDY PURSUED BY THE PRIVATE PUPILS OF THE LATE DR. FLETCHER.

WE have already expressed, in terms suited to the occasion, our deep sense of the loss sustained by the profession in general, and by our readers in particular, by the death of that most accomplished physiologist, Dr. John Fletcher, of Edinburgh. For a more detailed account of his life and labours, we have great pleasure in referring to our excellent cotemporary, the Quarterly Medical and Surgical Review; the third number of which contains a memoir, the details of which were derived from a source the most authentic. It is admitted, we believe, by those conversant with the subject, that his lectures, published in this journal, are quite unrivalled: and we reflect, with no small gratification, on having been the first to make the medical public acquainted with these masterly performances. We have now the additional pleasure of presenting our friends with a detailed account of the plan pursued in his far-famed examinations, embracing the whole range of medical science. It was divided into three great compartments; and two months were devoted to the consideration of each. Teachers of medicine will find this plan highly serviceable; while to students preparing for examination, at whatever board or college, and who wish to be competently furnished in every department of their profession, it will prove of the greatest value.

Conspectus of the Subjects treated of, more or less fully, in Dr. Fletcher's Courses of Lectures and Examinations.

FIRST DIVISION.

Animal Chemistry; Anatomy, general and descriptive; Hygrology and Physiology.

I. *Principles of the Body.*

Elementary.

Compound.

Water.

Sugar, resin, stearin, cholesterin, erythogen, cetin, ambrein, elain, butyrin, formic acid, &c.

Osmazom, picromel, urea, gelatin, mucus, fibrin, albumen, yellow matter, casein, lithic and allantoic acids, &c. Cantharidina, colouring matters, &c.

II. *Tissues of the Body.*

Cellular—adipose and medullary, mucous—dental, dermoid—ungular, pilous and epidermoid, serous, fibrous, cartilaginous—fibro-cartilaginous and osseous.

Muscular, internal, and external.

Nervous, ganglionic, and cerebral.

Vascular, arterial, venous, and lymphiferous, and chyliferous—parenchematous, erectile, &c.

III. *Organs of the Body.*

Nostrils and sinusses, cartilages, &c.

Nasal ducts and lachrymal organs, eye lids, eye-balls, &c.

Eustachian tubes and tympana, external ears, labyrinths, &c.

Mouth, salivary ducts, salivary glands and tonsils, teeth, tongue, lips, *&c.*

Larynx, trachea, bronchi and air-cells, lungs, pleuræ, *&c.*

Pharynx, gullet, stomach, duodenum, gall-ducts and pancreatic ducts, jejunum, ileum, cæcum, colon and rectum, liver, pancreas, peritoneum, *&c.*

Urethra, urinary bladder, ureters and ducts of kidneys, kidneys, *&c.*

Cowper's glands, prostate gland, vesiculæ seminales, vasa deferentia, and testicles, tunicæ vaginales, penis, *&c.*

Labia, clitoris, nymphæ, vagina, womb and fallopian tubes, ligaments of womb, ovaries, *&c.* Changes during pregnancy, deciduæ, parts of the embryo, *&c.*

Ducts of mammæ, mammæ, *&c.*

Thyroid gland, thymus gland, spleen, suprarenal capsules, *&c.*

Skin, corpus mucosum, nails, hairs, cuticle, fat, sebaceous follicles, *&c.*

Bones of the nostrils, orbits, ears, skull, mouth, neck, chest, loins, pelvis, upper limbs, lower limbs, *&c.* Articulations of bones, ligaments of lower maxillary bone, vertebræ, ribs, pelvis, upper limbs, lower limbs, *&c.*

Muscles of nostrils, eye-lids, eye-brows, eye-balls, external ear, internal ear, skull, tongue, palate, lips, cheeks, lower jaw, larynx, neck, chest, pharynx, loins, anus, perineum, upper limbs, lower limbs, *&c.* Bursæ mucosæ.

Ganglions, opthalmic, spheno-palatine, cervical, dorsal, lumbar and sacral, their nerves, secondary ganglions, *&c.* Spinal marrow, its nerves, sensific, motific, regular and respiratory, arachnoid coat, *&c.* Cerebellum and cerebrum, arachnoid coat, *&c.*

Pulmonary veins, heart (left side), pericardium, *&c.* Arteries of the system of the aorta, veins of the system of the venæ cavæ, heart (right side), pulmonary artery, lymphiferous vessels and conglobate glands of the system of Stenon's duct, lymphiferous and chyliferous vessels and conglobate glands of the system of the thoracic duct, *&c.*

IV. *Fluids of the Body.*

Mucilage, tears, saliva, gastric fluid, pancreatic fluid, bile, stools, urine, semen, menstrual fluid, lochia and milk.

Humours of the eyes, fluid of cotugno, amniotic fluid and fat.

Fluid of meibom, cerumen, sebaceous fluid, and sweat.

Marrow and synovia.

Bursal fluid.

Arterial blood, venous blood, lymph and chyle.

V. *Functions of the Body.*

Irritation in general, irritability, its seat, powers by which it is excited, caloric, light, electricity and galvanism, common chemical and mechanical stimuli, proper fluids of the body, sympathy, passions, will, *&c.* Different kinds of irritability.

Respiration, contraction of inspiratory muscles, *&c.* Formation of arterial blood, *&c.* Contraction of expiratory muscles, *&c.* Extrication of carbonic acid, *&c.*

Propulsion of arterial blood, relaxation and contraction of auricles and ventricles of heart, motion of larger arteries, pulse, comparative celerity of flow of arterial blood, *&c.*

Secretion, contraction of capillary arteries, calorification, formation of venous blood, *&c.*

Absorption, contraction of radicles of veins, and lymphiferous and chyliferous vessels, chylification, *&c.*

Propulsion of venous blood, lymph and chyle, vis a tergo, motion of larger veins, pressure, *&c.* Comparative celerity of flow of venous blood, *&c.*

Digestion, deglutition, chymification, propulsion of chyme, formation of stools, *&c.*

Generation, puberty, impregnation, developement of embryo, pregnancy, parturition, lactation, *&c.*

Sensation in general, sensibility, its seat, powers by which it is excited—only periodical. Different kinds of sensibility, smell, sight, hearing, taste, touch, *&c.*

Thought, faculty of thinking, its seat, power by which it is excited—only periodical. Different kinds of faculty of thinking — attention, imagination, *&c.* Passions.

Voluntary motion, power by which the irritability of voluntary muscles is excited—a proper irritation, its seat, power by which it is called into action—only periodical. Contraction of muscles in general; particular voluntary movements, *&c.*

SECOND DIVISION.

Etiology, Semiology, and Therapeutics, including Surgery, &c.

I. *Causes of Diseases in general.*

Age, sex, temperament, idiosyncracy, congenital or acquired, and habit of body, dependent on climate, situation, and season, habitual diet and line of life, &c.

Caloric, excess or deficiency, light, electricity, air, including contagious and in-

fectious miasms, aliment, including swallowed poisons, pressure, blows, wounds, &c., including poisons, applied directly to the skin, &c. Too much or too little exercise, retained secretions, passions. Too little or too much sleep, &c.

Inflammation and fever in general, indurations, hypertrophies, strictures, polypi, teeth, &c. Adhesions, ossifications, &c. Hydatids, worms, tubercles, encephaloid tumours, melanoses, schirri, calculi, increased secretions, dropsies, hemorrhages, collections of air, abscesses, displacements of parts, &c.—Spasms, convulsions, palsies, &c.

II. *Symptoms of Diseases in general.*

Alterations in the aspect of the nostrils, eyes, ears, mouth, tongue, &c., and their secretions,—of the chest and abdomen, (measurement, succussion, percussion, &c.)—of the external urinary and genital organs, and of the common integuments, &c., and their respective secretions.

Alterations in the processes of respiration, including snoring, sighing, gaping, hiccuping, hooping, sneezing, peculiarities of the voice, groaning, sobbing, laughing, coughing, &c.—of the action of the heart, pulse, &c. (the stethoscope)—of calorification,—of deglutition and chymification, &c., including ruminating, eructing, vomiting, &c.—of sensation, including as well irregularities of natural sensations, as the presence of such as are preternatural, as tinnitus aurium, bad taste, heartburn, nausea, stitch, tenesmus, strangury, formication, itching, anxiety, sense of weight, pain, &c.—of thought—and of voluntary motion, including peculiarities of the features, attitudes, gestures, &c.

III. *Treatment of Diseases in general.*

Climate and situation, heat and cold, including bathing, &c., air, aliment, animal and vegetable, and the preparation of each, exercise of various kinds, passions, &c.

Medicines, and the several methods of administering them, classification of medicines, and the mode of operation of each. Particular errhines, sialogogues, demulcents expectorants, emetics, purgatives, carminatives, diuretics, Emmenagogues, diaphoretics, epispastics, astringents, stimulants, tonics, sedatives, antispasmodics, narcotics, antacids, anthelmintics, &c. Preparation and formulæ of medicines.

Cauterizing, electrifying, galvanizing, acupuncture, blood-letting, &c., and the principal operations of surgery.

IV. *Particular Organic Diseases.*

Fevers, ephemeral, synocha, typhus and the plague, yellow fever and hectic fever, and quotidian, tertian, quartan, and eratic fevers.

Catarrh and inflammation of maxillary sinuses, polypi of nostrils, schirrus of nostrils and cartilages, epistaxis, ozena, and lupus.

Ophthalmia tarsorum and membranarum and iritis, leucoma, cataract and glaucoma, staphyloma, fistula lachrymalis, encanthis and pterygium, worms under tunica adnatæ, encephaloid tumour of eyeballs, hydropthalmia, purulent ophthalmia, ulceration of corneæ and irides, hypopyum and abscess of eyeballs, ectropium entropium, and prolapse of irides.

Otitis, stricture of eustachian tubes and meatus auditorii exteriores.

Parulis, odontalgia, cynanche parotidea, cynanche tonsillaris and inflammation of tongue, schirrhus of parotid glands, tongue, and lips, calculi of salivary ducts —ranula, ptyalism, aphtha, scorbutus, abscess of parotid glands, caries of teeth, and ulceration of tongue and lips.

Laryngitis, cynanche trachealis, bronchitis, peripnemonia, peripneumonia notha and pleuritis, hypertrophy of bronchi, hepatisation of lungs, adhesions of pleuræ, ossification, &c, of larynx, trachea and pleuræ, hydatids of bronchi and pleuræ, worms of bronchi, tubercles, encephaloid tumours and melanoses of lungs, calculi of bronchi, œdema of glottis and lungs and hydrothorax, hæmoptysis, pulmonary apoplexy and hæmathorax, emphysema of lungs and pneumathorax, ulceration of larynx, abscess of lungs, phthisis and empyema.

Cynanche pharyngea, inflammation of gullet, gastro enteritis hepatitis, inflammation of pancreas, dysentery and peritonitis, induration of liver and pancreas, hypertrophy of liver and pancreas, stricture of gullet, pylorus, gall-ducts, colon and rectum, polypi of gullet, stomach, colon and rectum, teeth, &c. in stomach, adhesions of peritoneum, ossification, &c. of gullet, stomach, gall-ducts and peritoneum, hydatids of liver and peritoneum, worms of small intestines, gall-ducts and large intestines, tubercles of stomach, liver, pancreas, intestines an peritoneum, encephaloid tumours and

melanoses of stomach, scirrhus of gullet, stomach, colon, and rectum, calculi of gall-ducts, jaundice, pancreatic ducts and intestines, cholera, pyrosis and diarrhœa, ascites, hæmatemesis and hæmorrhois, intestinal and ventral tympanites, ulceration of gullet, stomach and gall-ducts, abscess of liver and pancreas, ulceration of intestines, fistula ani, and abscess of peritoneum, intussusception, hernia and prolapse of anus.

Inflammation of urethra, cystitis and nephritis, hypertrophy of urinary bladder, stricture of urethra, polypi of urethra and urinary bladder, teeth, &c. in urinary bladder and kidneys, hydatids of kidneys, worms of urinary bladder and kidneys, tubercles and scirrhus of kidneys, calculi of urethra, urinary bladder and kidneys, diabetes, cystirrhagia and hænaturia, ulceration of urethra and urinary bladder, and abscess of kidneys, cystocele.

Orchitis, induration of vesiculæ seminales and epididymides, hypertrophy of prostate gland and scrotum, stricture of vasa deferentia, teeth, &c. in testicles, adhesions of tunicæ vaginales, ossification, &c. of testicles and tunicæ vaginales, hydatids of tunicæ vaginales, tubercles and encephaloid tumour of testicles, scirrhus of testicles, scrotum and penis, calculi of prostate gland, and vesiculæ seminales, hydrocele, hæmatocele, abscess of testicles, ulceration of scrotum and penis, and lues venerea.

Inflammation of vagina and hysteritis, hypertrophy of womb and labia, stricture of fallopian tubes, polypi of womb, teeth, &c. in womb and ovaries, ossification, &c. of womb and ovaries, hydrometra, worms of ovaries, tubercles of womb and ovaries, scirrhus of womb, calculi of womb, adipose tumour of ovaries, dropsy of ovaries, menorrhagia, physometra, ulceration of womb and abscess of ovaries, prolapse of vagina and womb, and inversion and retroversion of womb, extra-uterine conception, miscarriage, and preternatural labour.

Inflammation, scirrhus, and abscess of mammæ.

Splenitis, induration, and hypertrophy of spleen, ossification, &c. of spleen, hydatids of thyroid gland, and spleen, tubercles of spleen, scirrhus of thyroid gland, bronchocele, abscess of thyroid gland and spleen.

Strophulus, lichen, prurigo, rubeola, scarlatina, urticaria, roseola, erythema.—Burns, &c. boils and phlegmatia dolens, vitiligo, elephantiasis, barbados leg and binding of skin, lepra, psoriasis, plica polonica, pityriasis and icthyosis.—Corns, &c. worms under skin, acne, molluscum, adipose tumours of skin, and polysarcia, erysipelas, pompholyx, varicella, vaccinia, herpes, rhypia, miliaria, eczema and anasarca, purpura, pneumatosis, impetigo, porrigo, ecthyma, variola, scabies, sycosis, frambœsia and ulcers—Hospital gangrene.

Inflammation of bones, periosteum and ligaments, hyperostosis, necrosis, exostosis, ancylosis, nodes, and cartilages in joints, hydatids, tubercles and encepta, and tumour of bones, rachitis, mollities ossium, and hydrarthus, abscess of bones—Osteo sarcoma, &c. caries and anthropyosis.—Fractures and dislocations.

Rheumatism and gout, ossification, &c. of tendons, hydatids of muscles, calculi of bursæ mucosæ, adipose tumour of muscles, ganglion.

Myelitis, neuralgia, encephalitis and arachnitis, induration and hypertrophy of brain, adhesions of arachnoid coat, ossification, &c. of spinal marrow, brain and arachnoid coat, tubercles, encephaloid tumours, and scirrhus of spinal marrow, nerves, brain, and arachnoid coat, hydrorachitis and hydrocephalus, sanguineous palsy and apoplexy, abscess of spinal marrow, nerves, brain, and arachnoid coat, encephalocele.

Carditis (left side), rheumatism of heart, pericarditis, arteritis, phlebitis, carditis (right side), and inflammation of lymphiferous and chyliferous vessels, and conglobate glands—Bubo, induration and hypertrophy of heart, aneurism of heart, true aneurism of arteries and varix of veins, and of lymphiferous and chyliferous vessels, morbus cœruleus, and stricture of arteries—Dry gangrene, of veins, and lymphiferous and chyliferous vessels, polypi of heart, adhesions of pericardium, ossification, &c. of heart, pericardium, arteries, veins, lymphiferous and chyliferous vessels, and conglobate glands, hydatids of heart, pericardium and veins, tubercles of pericardium, thoracic duct, and conglobate glands, melanoses of conglobate glands, scirrhus of heart, veins, thoracic duct, and conglobate glands, calculi of heart, adipose tumours of heart, dropsy of pericardium, blood and air in pericardium, abscess of heart and pericardium, ulceration of arteries—False aneurism, of veins and lymphiferous and chyliferous vessels, scrofula, and tabes mesenterica.

V. *Particular Functional Diseases.*

Angina pectoris, pertussis, asthma, asphyxia.

Palpitation of heart, syncope, mercurial erethism, &c.

Spasm of gullet, gastrodynia and colic, hydrophobia, relaxation of gullet, and dyspepsia—Chlorosis, &c.

Incubus and nyctalopia, anosmia, hemeralopia, &c. and nervous palsy and apoplexy.

Insanity—Hypochondriasis, &c. Idiotism, and delirium tremens.

Spasm of sphincter of anus, and of sphincter of urinary bladder, strabismus, trismus, and tetanus, epilepsy, hysteria, chorea, catalepsy, and somnambulism, palsy of tongue, of sphincter of anus, and of sphincter of urinary bladder, shaking palsy, and barbiers.

THIRD DIVISION.

Zoology, Botany, Including Vegetable Chemistry, &c. and Mineral Chemistry, with reference particularly to the Materia Alimentaria and Medica.

I. *Animal Kingdom.*

Artificial Classification of Animals:

1. Lepus, Castor, Equus, Ovis, Bos, Cervus, Moschus, Sus, Physeter.

2. Phasianus, Columba, Tetrao, Meleagris, Numida, Scolopax, Tringa, Charadrius, Pelicanus, Anas, Alca.

3. Testudo, Rana.

4. Petromyzon, Raia, Acipenser, Muræna, Zeus, Pleuronectes, Perca, Scomber, Salmo, Esox, Mugil, Clupæa, Cyprinus.

5. Helix, Ostrea, Cardium, Mytilus.

6. Cancer, Cantharis, Coccus, Apis.

7. Spongia.

II. *Vegetable Kingdom.*

Principles.

Elementary.

Compound.

Water, Oxalic Acid, Caoutchouc, &c.

Sugar, (Alcohol and Ethers,) Sarcocoll, Glycyrrhizin, Olivile, Piperin, Gum, (Acetic and Zymic Acids, &c.) Tannin, Fecula, Inulin, Resin, Stearin, Elain, Camphor, Hordein, Cerin, Lignin, Myricin, and Kinic, Tartaric, Benzoic, Malic, Meconic, Citric, Moroxylic, Gallic, Ellagic, and Boletic Acids, &c.

Osmazon, Extractive, Caffein, Cathartin, Colocyntin, Asparagin, Gliadin, Narcotin, Albumen, Zymom, Fungin, Atropia, Hyoscyamia, Daturia, Strychnia, Emetia, Cinchona, Quinia, Brucia, Morphia, Delphia, Picrotoxia, Veratria, Colouring Matters, &c.—Bitumens.

Tissues.

Cellular—Medullary, Dermoid,—Epidermoid, &c. and Ligneous.

Vascular, Entire, Perforated, Spiral, &c. Glandular, &c.

Organs.

Leaves, Substance, Form, Direction, Relation, &c.

Branches, Direction, Relation, &c. Stems, Substance, Form, &c. (Culm, Stalk, Scape, &c.) and Roots—Stock and Radicle, Substance, Form &c.

Flowers—Stamen Pistil, Corolla, Calyx, (Glume, Perianth, Involucre, &c.) Receptacle, and Nectary, Form, Relation, &c. (Panicle, Spike, Umbel, &c.) Fruits, Substance, Form, &c. (Capsule, Berry, Drupe, &c.) and Se ds—Corculum, Cotyledons, &c. Principal Natural Orders of Vegetables.

Fluids.

Oils, fixed and volatile, Turpentines, Balsams, Gum-resins, &c. Sap.

Functions.

Irritation in general, Irritability, Powers by which it is excited—only periodical.

Respiration, Formation of descending Sap, &c.

Propulsion of descending Sap, Motion of Vessels, &c.

Secretion, Foliation, Calorification, &c.

Absorption, Formation of ascending Sap, &c.

Propulsion of ascending Sap, Motion of Vessels, &c.

Generation, Inflorescence, Germination, &c.

Artificial classification of vegetables:

1. Maranta, curcuma, amomum.

2. Olea, fraxinus, veronica, rosmarinus, salvia, gratiola, piper.

3. Crocus, iris, valeriana, triticum, secale, hordeum, avena, saccharum.

4. Dorstenia, krameria, rubia.

5. Solanum, capsicum, nicotiana, atropa, hyoscyamus, datura, strychnes, ribes, vitis coffæa, mangifera, callicocca, convolvulus, rhamnus, cinchona, bonplandia, menyanthes, anchusa, viola, daucus, crythmum, cuminum, angelica, sium, conium, ferula, bubon, heracleum, coriandrum, pastinaca, apium, pimpinella, anethum, carum, beta, gentiana, ulmus, sambucus, rhus, linum.

6. Bromelia, asparagus, allium, scilla, aloë, berberis, acorus ozyza, rumex, colchicum.

7. Æsculus.

8. Vaccinium, daphne, amyris, polygonum.

9. Anacardium, laurus, rheum.

10. Arbutus, rhododendron, pyrola, styrax, myroxyon, toluifera, cassia, hæ-

matoxylon, quassia, guaiacum, ruta, swietenia, copaifera, dianthus, oxalus.

11. Asarum, lythrum, canella, agrimonia, euphorbia.

12. Myrtus, eugenia, prunus, amygdalus, punica, psidium, pyrus, mespilus, fragaria, robus, rosa, geum tormentilla.

13. Thea, capparis, papaver aconitum, delphinium, wintera, helleborus.

14. Melisa, origanum, mentha, hyssopus, marrubium, teucrium, lavandula, digitalis, scrofularia.

15, Lepidum, cochlearia, brassica, raphanus, crambe, sinapis, nasturtium, cordamine.

16. Tamarindus, althæa, malva.

17. Polygala, pisum, phaseolus, vicia, dolichos, glycyrrhiza, astragalus, geoffrœa, pterocarpus, genista.

18. Theobroma, citrus, melaleuca.

19. Lactuca, cichoreum, cynara, arctium, leontodon, artemisia, tanacetum, tussilago, solidago, inula, anthemis, arnica, helianthus, centaurea.

20. Orchis, aristolochia.

21. Morus, betula, urtica, cocos, juglans, castanea, corylus, quercus, arum, iatropha, pinus, croton, ricinus, cucumis, momordica.

22. Salix, phœnix, myristica, spinacium, humulus, smilax, pistacia, menispermum, cycas, juniperus.

23. Holcus, acacia, veratrum, stalagmitis, carica, ficus.

24. Aspidium, fucus, ulva, lichen, agaricus, phallus, tuber, boletus.

III. *Mineral Kingdom.*

Laws of chemical affinity:
Caloric.
Light.
Electricity and galvanism.
Oxygen.
Iodine, with oxygen.
Fluorine, with ox.
Chlorine, with ox. and iodine.
Bromine, with ox. iod. and chlorine.
Hydrogen, with ox. iod, fluorine, and chlor.
Boron, with ox. and fluor.
Carbon, with ox. and hydrogen.
Phosphorus, with ox. and hyd.
Sulphur, with ox. chlor. carbon, and hyd.
Selenium, with ox. and hyd.
Nitrogen, with ox. iod. chlor. hyd. and car.
Zirconium, with ox.
Aluminum, with ox.
Ittrium, with ox.
Thorinum, with ox.
Glycinum, with ox.
Silicium, with ox. and fluor.
Magnesium, with ox. and chlor.
Calcium, with ox. fluor. chlor. and sulphur.
Strontium, with ox. and chlor.
Baryum, with ox. chlor. and sul.
Lithium, with ox.
Potassium, with ox. iod. chlor. bromine, hyd. and sul.
Sodium, with ox. and chlor.
Manganese, with ox.
Zinc, with ox. and chlor.
Iron, with ox. chlor. car. and sul.
Tin, with ox. chlor. and sul.
Cadmium, with ox. and sul.
Arsenic, with ox. hyd. and sul.
Molybdenum, with ox.
Chrome, with ox.
Tungsten, with ox.
Columbium, with ox.
Antimony, with ox. chlor. and sul.
Tellurium, with ox. and hyd.
Uranium, with ox.
Cerium, with ox.
Cobaltium, with ox. and chlor.
Titanium, with ox.
Bismuth, with ox.
Lead, with ox. and sul.
Copper, with ox. and chlor.
Nickel, with ox.
Mercury, with ox. iod. chlor. and sul.
Osmium, with ox.
Silver, with ox. and chlor.
Gold, with ox. and chlor.
Platinum, with ox. and chlor.
Palladium, with ox.
Rhodium, with ox.
Iridium, with ox.

NORTH LONDON HOSPITAL.

It is our painful duty to narrate a case wherein a surgical operation was under taken, contrary to the opinion of the operator himself, and followed by the most humiliating results, the almost immediate death of the patient. We also would have appended to this report one from St. George's Hospital, of an operation equally formidable, but we shall prefer giving that report for the same reason as we have extracted this, not until the operator publishes an account of the case in his own journal.

Case—W. B., aged 24, was admitted, Nov. 17, under the care of Mr. Liston. His occupation is that of a shoemaker. States that he was always healthy previous to the present affection. His family are healthy. Two years since he received a smart blow on the left side of the face, from a cricket ball, which was followed by much swelling, pain, and ecchymosis, all

of which, however, soon disappeared. Ten months since, the last molar tooth loosened spontaneously, and was extracted, after which the gum became much swollen and tender; the swelling increased rapidly, and extended to the side of the face, and in a few weeks it attained to half of its present size. Subsequently the three teeth adjoining became loose, and were extracted. After the extraction of the second molar tooth, not many weeks ago, there was some hæmorrhage, but it was soon arrested by pressure. The growth of the tumour was rapid at first, but of late it has been less so. During its development there has not been much pain.

At present, a tumour of about the size of a very large orange, occupies the left side of the face, involving the superior maxilla. The integuments of that side are much spread over the projecting tumour, and were of a red colour. The nose was pushed to the right side, and the lower eye-lid was prevented from descending properly. Within the mouth the tumour extended backwards, in a line with the hard palate, and near to the mesial line, projecting downwards, much below the gum of the opposite side. The left nostril was completely filled, and the tumour at this part was particularly firm. The other parts of the tumour were moderately firm, and at some points elastic. All the places from which the teeth had been extracted are healed, except that from which the second molar was taken, which remains open, but is not ulcerated, nor does any fungus protrude from it. A probe can be passed a short way into the socket, but not into the tumour. The first molar tooth remains, but is loose; there is no tenderness, or pain, in the part at present.

Operation.—Nov. 18. Previous to the patient being brought into the theatre, Mr. Liston said:—"The present operation is not one which I undertake from choice, but on account of the *urgent solicitations of the patient*. I do not think that the tumour is of the same benign character as the one which you lately saw removed; and although by no means so formidable-a-looking tumour, in fact, not being a sixth part of the size, yet I anticipate much greater difficulties in accomplishing its extirpation, both as regards its attachments and its vascular action; consequently, I cannot speak *favourably* of the ultimate result. There are, however, some points about this tumour which are not unpropitious,—such as its having followed a mechanical injury —the absence of ulcerations or fungous protusions in the situations from which the teeth have been extracted—the great firmness of the part within the nostrils, from which there has been no discharge, —and our inability to pass a probe into the tumour. The removal of the growth thus early, before malignant action is developed, or the surrounding parts become contaminated, gives the patient the *only chance* of its non-appearance."

The patient, on being brought into the theatre, was seated in a chair, and his head was supported on the breast of an assistant. The operation was commenced by the abstraction of the first and second incisor teeth of the left side. The first incision was commenced over the malar prominence, the operator cutting down to the bone, and through the integuments into the mouth, continuing the incision, in a curved line, to the left commissure of the mouth, the convexity of the curve being backwards. The second incision extended along the side and alæ of the nose, to the median line of the lip. The flaps so formed were dissected up from the tumour, which was exposed, together with part of the malar bone. The malar bone was now cut through, near to the superior maxilla, with Hey's saw, and the ascending nasal process of the superior maxillary bone was divided with the cutting forceps. With the same instrument, a notch was cut out from the border of the superior maxillary bone, at the point from which the teeth were extracted; and the hard palate was divided along, near the mesial line, with a strong pair of scissars, to the palate bone; with the left hand, the tumour was depressed, and the remaining adhesions in the orbit were divided with the knife. The mass was then removed with great facility. The cavity having been sponged out, some of the morbid growth was found adhering to the ascending plate and cell of the palate bone, and slightly to the pterygoid process of the sphenoid bone. This was removed by cross-cutting forceps. The cavity was again sponged out, and, upon a careful examination, no more of the morbid growth was found remaining, or any vessel discovered bleeding. It was then filled with dry lint, and the flap brought down, and fixed by means of two twisted and interrupted sutures.

The patient was now conveyed to bed, *a good deal exhausted*. Half a grain of muriate of morphia, with some wine, were given to him. Bottles of hot water were applied to the feet and epigastrium, and

water dressing was used over the face. No vessel required ligature, nor was the loss of blood great. The first part of the tumour was removed in *eight minutes*, and the operation completed in *fourteen minutes*. Soon after his removal to bed, he became convulsed, continuing so for a few minutes. The pulse was very quick and feeble, the extremities were cold, and the expression of the eye was very wild. After the convulsions ceased, he continued restless.

3, P. M. Has not rallied; pulse 126, weak; extremities cold; slight bleeding from the mouth, which ceased on the application of cold water to the wound. Muriate of morphia, half a grain, directly; carbonate of ammonia, and wine at short intervals.

4, P. M. He has slept for a short time, during which he appeared to be restless; pulse rather fuller. He awoke up slightly convulsed, but the effect soon passed away. Respiration slow and regular.

10, P. M. Awoke, and asked for something to drink. Some cold brandy and water was given, this having been substituted for wine. He then fell asleep, and continued in that state until a quarter past 11, P. M., when he awoke, violently convulsed. This state subsided, but he continued exceedingly restless; the pulse ceased to be felt at the wrist; the extremities became colder; a cold sweat broke out on his forehead, and he expired, slowly and convulsively, *ceasing to breathe* at about half-past 11, P. M.

The tumour was an albuminous sarcoma, consisting of cartilage, with spiculæ of bone, and a glairy matter, coagulable by heat. On examining the cavity, a clot of blood was found in it, upon the lint. The whole of the palate bone, and the root of the pterygoid process, were removed, leaving the internal and external pterygoid process with the soft palate. The sphenoidal cells were entire, the opening into which was easily seen, with a well defined margin covered with its proper lining membrane. A small portion of the ethmoid, was removed. The cells of this bone, together with those of the sphenoid cells, were quite free from disease. No further *post-mortem* was allowed.

Since the *death* of the patient, it has been ascertained that he had led a most dissolute life, which, before the operation, he most strongly and repeatedly denied.

Although the result of the operation performed in the above case, was *unfortunate* with regard to the suffering patient, it furnishes a *useful lesson of admonition* to students and *young* practitioners. Often does it happen that a surgeon who has just emerged from the portals of the colllege, seeks for opportunities to display his skill in operating, that he may thus establish his reputation as an operating surgeon. Is it not evident from the report of the case before us, that the first attempt of the juvenile aspirant might be made on a patient whose constitution, *weakened and broken down by dissipation*, could not recover from the shock thus inflicted on his feeble powers? Ever should it be recollected, then, by *young* practitioners, that success after operations cannot be *ensured*. *Advantageous* as must be the result of this case to the student, and to the *youthful* members of the profession generally, it must prove of still *greater value* to Mr. Liston himself. The reputation of that gentleman as an operator *stands unrivalled*, and the dexterity which he possesses is a subject of *astonishment* with surgeons who have visited the *continental* hospitals. The public, therefore, on discovering that an operation may *occasionally* be followed by *fatal* consequences, even when it is performed by the *most* distinguished of *our* surgeons, will *shrink* in dismay from the *thought* of entrusting their *lives*, in diseases requiring operations, to half instructed *bunglers*, who, under the pernicious influence of the system of nepotism, obtain the office of surgeon in our old endowed hospitals. The *issue* of the case of the patient, E. B., proves, beyond *question*, or dispute, that *capital* operations in surgery cannot be undertaken with safety to the *reputation* of the practitioner, unless by such a man as Mr. Liston!!

We have thus extracted the details of this case, along with the reflections which have been made on it—but on which we cannot avoid some observation.

In the first place we cannot agree with Mr. Liston, and acquiesce in his opinion, that in the above case, or indeed in any case, is a surgeon warranted in performing any operation however important, merely at the solicitations of the patient.

Now what does two eye witnesses state on these points. "A young man apparently in good health, walked steadily into the operating theatre, and was carried out almost lifeless"—"a good deal exhausted." "There were upwards of two hundred spectators present, many of whom became faint, and some were carried out of the theatre,—such was the scene."

As for the commentaries next made on this operation, they ought not to pass without animadversion.

We are told that it furnishes a *useful lesson of admonition* to students and *young* practitioners. The operator next states, that he resorted to this operation, because it afforded "the *only chance* of its non-appearance." To this argument we cannot assent. In fact it is no argument at all,—and only a futile excuse for performing an operation. If Mr. L.'s opinion of the true nature of the disease was correct, then the patient had *no* chance.

Then comes the account of the operation itself, and we are informed that the patient was "conveyed to bed a good deal exhausted, that *one* part of the tumour was removed in *eight* minutes, and the operation *completed* in *fourteen* minutes! This no one can deny, but we do assert, that this useful lesson of admonition was given at too great a sacrifice, and no one has a right to give such useful lessons of admonition at the expense of the life of a fellow being!! Next we are told that it will be a lesson of admonition of still *greater value* to the operator himself—for which we most cordially offer our best hopes,—and to finish these most extraordinary comments, we are told in conclusion, that as even in operations which are performed so as to create *astonishment* may *occasionally* prove fatal, we ought to shrink in *dismay* from the *thought* of intrusting lives in diseases requiring operations to *half instructed* bunglers, mark reader, half instructed Bunglers!!

But the concluding sentence demands particular attention, and if the matter was not of too serious a character, we would dwell on this as well as on other points regarding the theatrical exhibitions so often witnessed in our London Hospitals.

"The issue of the case proves beyond question or dispute, that *capital* operations in surgery cannot be nndertaken with safety" (not to the patient) "to the reputation of the practitioner, unless by such a man as Mr. Liston!!!"

Chronic Rheumatism, Hydriodate of Potash.

Case 1.—Mary Maloney aged 46, was admitted Oct. 23, under the care of Dr. Elliotson. A fruit-woman exposed to all kinds of weather. Has been ill for twelve months, at first felt pain in the ankles, knees and hips, which gradually extended all over the body—unable to walk. Now complains of the same pains which are relieved by heat.

October 26th.—Solutio Hydriod Potass ʒss ter in die.

29th.—Much better.

Auge solutio ad Ɔij.

November 1st.—Better.

Auge solutio ad Ɔiiss.

8th.—Has been improving since last report, discharged on the 15th well.

Case 2.—Maria Curtis, aged 30, was admitted October 10th. Dress-maker, about a week since, felt a stiffness in the right knee, which then went to the ankle where it it has since remained. Both shoulders then became affected, as did also the right wrist, in which there is a little effusion. No affection of the heart.

Present symptoms.—She has all the above, with the addition of night perspirations, but she has less pain than when she was first attacked. Although there is inflammation to be seen, the pains are better when she is warm. Inflammation of the ankle, tongue white, bowels open, pulse 96, full. Catamenia regular.

October 11th.—Sol. Hydr. Potass. ʒss ter die.

12th—More effusion in the wrist, pains rather better, but the foot very painful.

Auge Hydr. ad Ɔiiss.

18th.—Effusion in the wrist has disappeared, but there is still pain in the ankle.

Auge Solutio ad ʒi. As the bowels are confined, to have a purgative.

22nd. Feels better, but complains still of her foot.

Hirudines xij pedi. Her general health better.

25th.—Hirud. viij. pedi. Still improving.

29th.—Still improving, Hirudines viij. rept.

Nov. 1 and 5.—The leeches applied again. Better.

10th.—The foot is more painful, complains of violent headache. Says she is a week passed the time, when she should have menstruated.

11th.—Catamenia have appeared, she is better.

26th.—Improving since last report, discharged on the 29th, well.

ST. GEORGE'S HOSPITAL.

We have been called upon to correct our former statement relative to certain points in the late election of the appointment of the Apothecary at St. George's.

In the first place we are informed that the name of the successful candidate is *Monsieur du Pasquier!* Secondly that he had the strenuous support of Dr. Seymour and Mr. Cutler, but it has not yet transpired for whom Sir B. Brodie voted on this *most* important occasion!!

Reports of Cases Treated in the Philadelphia Hospital at Blockley. By W. W. GERHARD, M.D., one of the Physicians.

(Concluded from page 406.)

General Remarks upon Gangrene of the Lungs.—Pathological Anatomy.—The gangrene was situated in the lower lobes in every case but one. In two instances it was extended to both lungs. The right lung was rather more frequently affected than the left The most common point of origin of the gangrene was at the upper and posterior part of the lower lobe. In the earliest stage, the pulmonary tissue was of a livid red colour, engorged with reddish serum, and slightly softened; the bronchi passing through it were reddened, but not thickened. The diseased lung was nearly similar to that of the first stage of pneumonia, but was much darker. As the lesion advanced, the texture of the lungs was softened, until it became of a pulpy consistence, and finally was resolved into a fluid of a most fœtid odour and dark brown colour, the pulmonary blood-vessels could still be distinguished in the midst of the liquid, and retained their natural aspect, except where the surrounding texture was broken down. Coagula obstructed the calibre of the vessels in some subjects; in the others, they were not carefully examined. If the disease proved fatal at this stage, I found the walls of the cavity formed of the pulmonary tissue, infiltrated with a dark liquid, and softened. If the disease was a little more advanced, the excavation was lined by a false membrane of new formation, separating the gangrenous cavity from the tissue of the lungs. This false membrane indicated the cessation of the gangrene; it was of dull white colour, not much thicker than writing paper, and was generally in contact with healthy pulmonary tissue. In those cases in which the disease was cured, the further progress of the lining membrane could stlll be traced by the changes in the expectoration, The purulent sputa gradually ceased, and were replaced by whitish mucus, as soon as the cavity was converted into a mucous or muco-serous tissue, very analogous to the lining membrane of the smaller bronchial tubes. In the autopsy, which was made of the body of a patient dead nine years after an attack of gangrene, the cyst remained perfectly distinct.

Symptoms.—Hæmoptysis occurs in rather more than half the cases of gangrene of the lungs. It is not the first symptom, but is preceded by a catarrh, with mucous or sùbcrepitant rhonchus. The hæmorrhage of gangrene is usually more abundant than that which often occurs in pulmonary phthisis; the blood is dark and not frothy.

In every instance in which the patient was seen in the earliest stages of the disease, I could distinguish the humid rhonchi, indicating bronchitis, or at least the secretion of liquid into the bronchial tubes. There was in no instance bronchial respiration, dull sound on percussion, or rather unequivocal evidence of pneumonia; and in one case only (that of Furey), was there even reason to suspect that pneumonia may have preceded gangrene.

The smell of the breath and of the sputa was very fœtid in every case but one, in which the gangrene was latent. The odour, in some cases, resembled gangrene of external parts; in others it was almost equally offensive, but of a different character. The gradual diminution of the fœtor indicates the cessation of the gangrene and the removal of the dead tissue.

The characteristic fœtor was offered by the expectoration in every case in which the cavity communicated with the bronchi, but the sputa were of various aspect, greenish-yellow (Case III.), blackish and thin (Case VII.), or brownish and green (Case VI.); as soon as the slough separated, the sputa always became muco-purulent, and retained that appearance until the termination of the disease, when they consisted of simple mucus. The variations in the expectoration, therefore, indicate the changes in the cavity, and the gradual isolation of the sloughing tissue by a false membrane, which afterwards secretes healthy pus.

The cough was neither severe nor painful in the early stages, but when the tissue was softened and the cavity formed, it was severe, harassing, and occurred in paroxysms which could not be checked until free expectoration occurred. The cavity was then cleansed of its contents, and the patient removed in comfort until the sputa again accumulated.

There was no pain, except when pleurisy complicated the gangrene.

The degree of fever was also exactly proportioned to the severity of the pleuritic inflammation.

The physical signs of gangrene were well marked in every case but one, that in which the lesion was latent; a mucous

or subcrepitant rhonchus preceded the gurgling, which was developed as soon as the cavity had attained the size of a walnut; it was more liquid than the gurgling of tuberculous cavities, lasted until the entire evacuation of the gangrenous matter, and did not entirely disappear until the muco-purulent sputa had diminished in quantity. The cavernous rhonchus gradually increased, after the liquid contents of the cavity were removed, and continued until cicatrization began. The dull sound on percussion was not very evident in the earliest stages of the gangrene, until the surrounding tissue was engorged; it was dullest when the sputa first assumed the gangrenous odour; it gradually diminished on the approach of cure.

Treatment.—In no disease are the therapeutic indications more clearly defined than in gangrene of the lungs. The different stages of the affection are so well marked, and differ so widely from each other that there is little risk of erring in the treatment appropriated to each condition of the disease. In the treatment, the most important distinction is between the gangrene itself and the secondary pleurisy resulting from it.

Gangrene occurs in exhausted subjects, either affected with diseases calculated to weaken the powers of the system or enfeebled by a life of intemperance. There are found exceptions to this rule; but one occurs amongst the preceding cases, it is that of the woman who was taken ill after working in a damp and cold apartment filled with the deleterious fumes of lead. The circumstances, therefore, under which the disease originates, as well as the evident absence of fever and the exhaustion of the patient, indicate the necessity of a tonic and supporting treatment. Wine, the preparations of cinchona, with nutritious broths, and other articles of animal food are required; to these remedies, opium should be added to allay the paroxysms of coughing. I have never used ipecacuanha, but if emetics should become necessary to assist the expectoration, this medicine is evidently more appropriate than the tartarized antimony or other debilitating remedies. The solution of the chloride of soda seemed useful, but it was used with some reserve from the fear of disordering the stomach.

The inflammation of the pleura and of the pulmonary tissue, which attends or rather follows the gangrene, requires a special treatment. When this inflammation is severe, the disease is of a more inflammatory type than it is in most cases, and is relieved by a bleeding, or, which is still better, by free application of cups to the side affected. Blisters were also of unequivocal advantage, and were more effectual in diminishing the pain of the consecutive inflammation than any other remedy. In short, the pleurisy was relieved by the treatment usually directed when it occurs without previous gangrene of the lungs. It is necessary to recollect that in gangrene of the lungs, prostration takes place more easily than in most other diseases, and that the treatment which is most useful in relieving the secondary inflammation, may aggravate the tendency to gangrene unless conducted with much discretion. The same necessity for the exercise of discrimination on the part of the physician, exists in gangrene as in pulmonary consumption. In both these diseases there are two principal indications, one is to check the progress of the original affection by a supporting treatment, the other to arrest the symptoms dependant upon the secondary pleurisy. Yet, singular as it may seem, gangrene of the lungs is still treated by some practitioners as if it were an active inflammatory disease, to be cured by bleeding and restricted diet, instead of tonics and nutritious food.

Fatal Pleurisy in a Tuberculous Patient, and Chronic Tubercular Peritonitis: Cases, illustrative of Pathological Laws, first pointed out by Louis; with remarks. By Elisha Bartlett, M.D., Professor of Pathological Anatomy in Berkshire Medical Institution.

Case I. Miss A. S., died December 8, 1835, and an examination of the thorax was made eighteen hours afterwards. The sound, on percussion, was flat over the whole left side of the chest. On laying back the sternum, its serous lining, on the left side of the mediastinum, was found covered with a false membrane, as thick as common pasteboard, of a firm texture, organized, and containing red vessels. It could be separated by a moderate degree of force from the subjacent serous membrane. The thoracic cavity of the same side contained about three pints of limpid, reddish serum. The lung, flattened like the hand, from one and a half to three inches thick, was pressed against the mediastinum. At the apex of the lung, there was an adhesion between the pleural surfaces, of an oval form, nearly as large as the palm of the

hand. This adhesion was pretty easily destroyed, leaving upon the pleura pulmonalis a rough, bloody surface. The compressed lung, at its upper and thickest portion, was apparently free from disease, and quite permeable to the air. On approaching the inferior portions, the tissue was of a deep red colour, like healthy muscle, and it had the *carnified* appearance commonly found in lung compressed by effused fluids. The lung in this state contains little or no air, is less friable, and more flabby than the pulmonic tissue in the first period of inflammation. It resembles, to a considerable extent, the *splenified* condition so frequently found about the lower margin of the lungs after death from typhus. This compressed and inferior portion of lung contained a great number of gray, semi-transparent granulations, generally about the size of a pin's head. The entire surface of the pleura, lining the walls of the chest and the compressed lung, was covered with a fibrinous layer like the false membrane already described. Several very delicate bands, resembling in tenuity and transparency, the film of a soap-bubble, were seen stretching across from the corresponding but separated surfaces of the pluræ.

In the right side there were old adhesions extending over nearly the whole of the superior, lateral, and posterior parts of the pleuræ. The upper lobe of the lung had the hard, knotty and irregular feel so characteristic of tubercular lung. On laying it open, it was found to contain two tuberculous excavations. The largest was about the size of a hen's egg, and was situated in the anterior part of the lobe, just beneath the surface, opposite the second and third ribs. The smaller one, about as large as a horse-chestnut, was at the summit of the lung. Both cavities were lined by smooth, firm, distinct cysts, and these were covered on their inner surfaces with a soft, friable, false membrane. Each cavity contained a small quantity of thick, creamy, inodorous pus. The entire remaining portion of this lobe was heavy and solid from the crude tubercles with which it was crowded. Immediately underneath the pleura, and exactly at the apex of the lung, there was a single tubercle, of a firm, cheesy consistence, as large as a robin's egg. The lower portion of the right lung was still in functional condition, but contained a large number of the gray granulations.

Case II.—Miss E. S. died June 27th, 1835. The body was examined on the following day. The cavity of the pleura, on each side of the chest, was entirely obliterated by the universal adhesion of its free surfaces. The upper lobe of the left lung contained several tuberculous cavities. Most of them were not larger than a pigeon's egg. Very near the summit there was one nearly empty, about as large as the thumb. The whole lung on this side, from its apex to its base, and throughout its entire substance, was crowded with tubercles in their various stages of development. Some were still hard and cheesy, and others were softened, like a thick homogeneous cream. The lung was almost wholly unfitted for respiration. The right lung was in a nearly similar condition. The tuberculous depositions were less advanced in their progress, and there was more healthy lung on this side than on the left. The proportion, however, even here, which admitted air freely, was exceedingly small. It did not amount in volume to more than one quarter of the lung. The healthiest portion was in the anterior part of the middle lobe. On both sides, the tubercular matter extended very near to the lower margins of the organs.

The cavity of the peritoneum was almost as entirely obliterated by a general adhesion, as was that of the pleura. This adhesion, like that in the thoracic cavity, was, evidently, the result of chronic inflammation. It had none of the characters of a recent and an acute affection. There was no appearance of increased vascularity, and there was no effusion of serum. The mutually adherent surfaces of the peritoneum could be separated from each other without much difficulty. Underneath the intestinal peritoneum, especially that portion of it lining the small intestines, there were innumereble minute granulations of a cartilaginous hardness. Their average size was about that of a pin's head.

I did not see either of the foregoing cases before their fatal termination. The subject of the first was under medical treatment only two or three days previous to death. It was ascertained that she came from a distant part of the country in July last, with a bad cough. A fellow boarder says that the cough left her, although she is not confident that she was entirely free from it. At any rate, she was able to attend to her work till seven weeks before her death, when she was attacked with measles. After the subsidence of this disease, she resumed her

work for one week. Since that time, she has had a troublesome cough and great dyspnœa, especially on lying down. She was unable to support the recumbent position for several days preceding her death. It may fairly be said that she went through the entire course of the tubercular and the pleuritic disease without medical treatment. In regard to the second case, the only circumstance worthy of notice here, is the fact that the peritoneal inflammation was wholly latent. The patient was attended, at different times, by a skilful practitioner, and during the entire progress of the disease, there was no symptom which could lead him to suspect the presence of any abdominal affection.

I have reported these cases, simply, as examples of certain curious pathological relations, to which the attention of physicians was first called by Louis. I am quite aware, that, as pathological histories, and apart from the connexion just spoken of, they are almost wholly valueless, for the very plain reason that they are but partial and imperfect facts, a small number only of the organs having been examined. But they are sufficiently full and definite to answer the purpose for which they are given.

In the first edition of Louis' *Researches on Phthisis*, published in 1825, the author says, "If the peripneumony, which supervenes during the latter stages of phthisis, marches rapidly and hastens the fatal termination, this is not the case when it manifests itself at an earlier period of the disease, the patients still continuing their occupations, not much emaciated, and their strength but slightly impaired. Under such circumstances, these intercurrent pneumonias are almost always cured, even though there may exist in the lungs tuberculous excavations. The same cannot be said of a pleurisy, more or less severe, which may occur during the progress of phthisis. We have not seen it completely cured, one case only excepted, even when it came on while the tubercles were yet crude and unsoftened. The severity of the disease may be mitigated, the effused fluid may be partly absorbed, but it is not wholly removed, and after a shorter or longer time, the patient dies, having pulmonary tubercles, and the pleura in one side of the chest lined with false membranes, and its cavity containing effused fluids, varying in character and quantity in different cases."

(*To be continued.*)

THE WORKING OF THE ANATOMY BILL.

We are happy in having it in our power to state that in consequence of the enormous abuses in the distribution of subjects for dissection in Edinburgh, and a system of favoritism which had influenced the anatomical inspector, the matter has undergone a thorough investigation, which has led to Dr. Cragie's *active* services being for the future *dispensed with*.

The unequal distribution of subjects amongst the anatomical teachers in London, will also meet with the most searching scrutiny; and we must say that such inquiry is loudly called for, in Mr. Lucas's case, whose own statement we have subjoined, as given in the public papers.

It has appeared that from the register of students attending the anatomical class alone of the Hunterian School of Medicine, they amount to no less than fifty-four, and up to this date they have had but *one subject* for dissection.

We shall on a future occasion give a list of the number of subjects, and number of pupils at other schools, in order to show the *real state* of the working of the Anatomy Bill.

To the Editor of the Times.

Sir,—The distribution of subjects by the inspector of anatomy this session, has been so partial and inconsiderate, that instead of the Anatomical Bill of Mr. Warburton being an improvement upon the old system, when 20*l.* was the usual sum paid for a subject, it tends, under its present management, to create confusion and dissatisfaction.

I have a class exceeding fifty pupils, who have entered to my lectures and dissections, and now, though the medical session is, including holidays, one-half advanced, I have received for their use but one subject.

My own interests must suffer from such an unjust administration of a law intended by the legislature to be salutary; but this I care little about, in comparison to the interests of those gentlemen who have placed confidence in me, and who are residing in London, at a considerable expense, in the pursuit of professional knowledge; particularly in the science of anatomy, which forms the very foundation of their future success in practice.

Why this marked neglect, notwithstanding my repeated applications to the officers appointed under the Anatomical Bill for the impartial distribution of sub-

jects, towards a school which has registered in its anatomical department the first year of its existence over fifty pupils, I cannot divine; unless it arises from a desire to strangle in its birth an institution which in its very infancy has evinced an Herculean power in contending the palm with others of a larger and older growth. I have transmitted to Lord John Russell, under whose license I have been a teacher of anatomy these three years, a statement of the above serious grievances, with a hope that his lordship will direct attention to their rectification as speedily as possible.

And I beg to say, I would not trouble you with these observations, were it not that the interests of the medical students at large are equally involved with those of my own class; that my own character is more or less involved in their interests, and that the readiest way of setting all matters to rights is through the influence of your influential and widely-circulated journal.

I have the honour to be, Sir,
Your very obedient servant,
P. Bennett Lucas,
Surgeon to the Metropolitan Free Hospital, and Lecturer upon Anatomy and Physiology in the Hunterian School of Medicine.

7, Store St. Bedford Sq. Dec. 5.

INTRODUCTION OF CHLORIDE OF ZINC INTO BRITISH PRACTICE.

To the Editor of the London Medical and Surgical Journal.

Sir—As in your review of Dr. Bureaud Rioffrey's work on the use of chloride of zinc, you have made an extract from his preface, in which he states, "whilst awaiting the result of the application on several patients, it came to my knowledge that the young surgeon who had taken my place during my stay in Paris, to whom I have communicated the object of my journey, and on my return imparted the result of my observations, had published *his* researches on a new method of curing the cancer." I therefore request you will, in justice to Mr. Ure, the young surgeon referred to, insert this letter, to request that your numerous readers will suspend their judgment until Mr. Ure's explanation shall be laid before the public, which I am authorised to state he will do immediately, in the *fullest* and *most satisfactory* manner, in one of the hebdomedaries.

As you have thought fit to insert the poison in your journal, I hope you will have no objection to give the antidote.

I have the honour to be, Sir,
Your obedient servant,
Frederic Williams.

Pentonville, Dec. 5, 1836.

BOOKS FOR REVIEW.

Histoire des Maladies observées a la Grande Armée Francaise, pendant les Campagnes de Russie in 1812, et d'Allemagne en 1813. Par le Chevallier J. R. L. Kirckoff. Troisieme edition. Anvers, 1835, 8vo. p. 424.—A most interesting and valuable work.

A Practical Treatise on the Management and Diseases of Children. By R. T. Evanson, M.D. Professor of Medicine; and H. Maunsell, M.D. Professor of Midwifery in the Royal College of Surgeons in Ireland. Dublin, 1336. Frannin and Co. 1 2mo. pp. 527.

The Fallacy or the Art of Physic as Taught in the Schools, with the development of New and Important Principles of Practice. By Samuel Dickson, M.D. Edinburgh, 1836. Black and Co.

Homœopathy Examined, or Homœopathy in Theory, Allopathy in Practice. By Robert Verity, M.D. Member of the Universities of Edinburgh and Gottingen. Paris. 1836. Galignani and Co.

Statement of the Proceedings which have led to the Resignation of the Medical Officers of the Northern Dispensary. pp. 28.—An instructive pamphlet to the profession and community, as regards the management of Dispensaries.

TO CORRESPONDENTS.

Our Cork Correspondent. The Dublin or any of the British Colleges of Physicians have no power to grant degrees in Medicine, or confer the title of Doctor. A Licentiate, unless an M.D. of some University, has no legal or just claim to be called Doctor. An M. B. is styled Dr. by courtesy, but not by right.

Medicus.—There is no need of an indenture for the College. The certificates of the parties with whom the candidate lived for five years, will be sufficient; and these, with the declaration of the father that the candidate served him five years, will, most probably, be admitted by the Apothecaries' Hall. But the courses of lectures required by both bodies must be complied with. If *Medicus* will favour us with a call, or forward his address, we shall give him farther information, which will be most useful to his friend.

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THE

London Medical and Surgical Journal.

No. XVI. SATURDAY, DECEMBER 17. Vol. II.—(1836.)

NOTES OF LECTURES ON PHYSIOLOGY.

By the late Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. I.

Our readers must often have regretted the abrupt termination of Dr. Fletcher's Lectures, as published (and that for the first time) in this journal; and still more must they have lamented the melancholy event to which that termination was owing. We are happy in being able, in some degree, to supply this deficiency, by presenting them with an outline of his course. We say an *outline;* for it puts forward no claim to be considered *full*, or *complete*. All we shall aim at is to make it correct, *as far as it goes;* and have no doubt it will sharpen the appetites of our friends for the posthumous work of this distinguished physiologist, now preparing for publication by his friend Dr. Lewins.

INTRODUCTION.

Physiology draws its resources from all the other medical sciences. It may thus be considered as forming a cement between them; and has hence obtained the title of Institutions of Medicine. A man may be acquainted with the minutest muscle or nerve; but unless he be a physiologist, he cannot apply his knowledge to any good purpose. Unless he goes farther, the few steps he has advanced will be of no benefit; for without physiology, an old woman may prescribe as well as the most learned fellow of the most learned college in the world. Without it, anatomy is hardly to be considered a science belonging to medicine. With eye-sight and memory, a person may become an anatomist or a practitioner; but in physiology we must reflect and reason. Two men cannot *see* the same object differently; but they may *infer* differently on the same subject. On few subjects has so much nonsense been broached, as on the present; from the habit of pronouncing confidently on insufficient evidence. It is not only seen through an indistinct medium; but through a distorting lens. Hypothesis is often confounded with rational theory.

We must not, however, think truth unattainable, because it has not yet been attained. Great advances have been made. Compare, for instance, the modern discovery of respiration being performed by the intercostal muscles, with the old doctrine of the air being attracted by the lungs; or the circulation of the blood, as now attributed to the action of the capillaries, with the old whim of the loss of balance of the fluids; or, finally, the present doctrine of stimuli acting on irritability, with the old one of an Archæus. It was once thought that the fœtus was formed by the intermixture of the male and female semen in the uterus; that if the female semen came from the right *kidney*, the child would be a male; if from the left, a female. Others said that the uterus had two cavities; and that if the embryo got into the right it would be male; if into the left, a female. Others affirmed, that in order to produce a female, the semen required to be more diluted.

It is maintained by some, that expeperience is the only ground of practice. They are obliged, however, to reason on every symptom, whether they will or not; and therefore they ought to qualify themselves to reason accurately. It is owing to the neglect of reasoning among the community, that medicine has always fallen so much into the hands of priests of whatever religion, and we read of such spells as ordering a bone sticking in the gullet to ascend or descend, in the name of the Lord Jesus Christ. These practitioners often represented their medicines

as twenty times more powerful than they thought them; but they thought them twenty times more powerful than they were. In many nations the priests are still their doctors; though with names so unfortunate, as to render it utterly impossible for European jaws to be prosperously delivered of them.

It is not to chance, but to reasoning, (though often of a very erroneous kind,) that we are indebted for our most valuable remedies. Thus cold bathing was adopted in some fevers, from the notion that the patient was too hot, and required cooling; poultices were introduced from the belief that suppuration was a melting of the solids, which melting was promoted by heat; hot and cold baths were designed to open and shut the pores; errhines to clear the brain of phlegm; purgatives in melancholia to clear the intestines from black bile; diuretics in dropsy, because Hippocrates thought the kidneys thickened the blood in that disease, by drawing off the watery parts; emenagogues to draw away the menstrual fluid, which was looked on as something very pernicious (that of "a red-haired eunuch" being accounted the most horribly offensive thing in nature); and, lastly, blisters, from their benefit being supposed to depend on the discharge they occasion. So that had the empirics succeeded in establishing their principle, that experience is the only ground of practice, they would have had very little practice with which to solace themselves.

Deficiencies in knowledge are a disgrace, not to the profession, but to the men who are chargeable with them. The times of patronage are fast fading away. It is not now acquiesced in silently; but when unworthily exercised, calls forth general indignation. By their own merits people must now stand or fall.

It is to physiology that medicine is indebted for being a science at all; and it is that department with which unprofessional people are best acquainted. Almost every disputed point may be explained by twenty different hypotheses, all apparently of equal value; but we must see which agrees best with all the facts bearing on the subject. The chief beauty of a system is consistency; and that is the best system which accounts for most facts, and not for a few facts in the best way. Nature acts by general laws; and hence we must sacrifice the particular to the general, unless the discrepancy be of such a nature as to shake the whole system; and then it must be remodelled altogether. We must not be too tenacious of any opinion, and if any which we hold be found wrong, we should not lament its loss, but rejoice that we are wiser to-day than we were yesterday. It is cant to despise literature; but it is worse than cant, it is impudence, to write on any subject, without knowing all that has been written upon it before. In this writing age, however, examples of it are not wanting.

Matter is generally divided into organic and inorganic. Both are formed of the same ultimate principles; but the latter presents no difference of structure in different parts, no relative arrangement of parts, and is not included in a general covering. Crystals appear to have an arrangement; but there is no difference in the particles in reference to each other. They are independent of each other; for (as Kant says) the reason of the whole resides in each part; while, in organic bodies, the reason of each part is found in the whole.

The ultimate structure of organic bodies is generally cellular. The latter forms tissues; and these form organs. The cellular tissue seems to be formed in man of globules, the eighth thousandth part of an inch in diameter. These globules are of the same size in all the vertebralia; but in the invertebralia there are small globules intermixed with larger. The great bulk of the solids consists of membrane, which lines all the cavities. and constitutes the main part of the glands, vessels, &c. The motions of inorganic bodies are fixed and determinate; but the laws which regulate those of organic bodies are less obvious, and their motions are therefore apparently indeterminate.

The life of a being, is the sum of the functions that being performs. Hence life is characteristic of organization. Inorganic bodies do not require previous bodies of the same kind, from which to derive their existence; but organic bodies do. The former are affected by different agents which the latter resist. Living plants will resist water sufficiently hot to boil them when dead. The human body can resist a temperature, during life, of 315°; although if dead, this degree of heat would have roasted it. Seeds often pass uninjured through the alimentary canal, exposed to all the powerful solvents it contains. Living worms, and the living stomach itself,

are examples of the same fact. The next thing to be observed is the nutrition of organic bodies by assimilation; while inorganic bodies grow only by accretion. All organic bodies are subject to death; but the inorganic remain unchanged for ever, unless by chemical or mechanical agents. Does this difference depend on anything possessed by the former, or only on their different properties?

The term "*life*" is very vaguely employed. Some think it is a subtle principle, the cause of all the phenomena observed in living beings; others regard it as only the sum of these phenomena. The former of these opinions was held by all ancient authors, except the Epicureans. It is in the nature of man to ascribe effects to some material cause; and we still hear of the matter of life, the vital principle, &c. The *onus probandi* lies with those who assert, and not with those who deny it. It is easy to conceive that certain bodies may have other than chemical and mechanical properties; for just as phosphorus possesses inflammability, and ivory inelasticity, living matter may have a peculiar susceptibility, brought into action in proper circumstances. It seems impossible to believe that a corpse can be so altered from the living body, without the loss of something which was the cause of life; but the cause of crystallization, and of various other phenomena, is equally unintelligible. It is not more difficult to understand how thought is engrafted on *matter*, than on what is *immaterial*. All we know is, that life is dependent on organization. This opinion has unjustly given rise to the charge of irreligion; but it is the only view which is consistent with real religion. Those who argue on the other side, seem to think that life is identical with the soul; but if that were the case, dogs, polypi, and vegetables, must have souls too, and the same hope of immortality; the difference being not in kind, but in degree. But the hopes of man are better founded than on a presumed existence of the principle of life. Brown shewed that life is neither matter nor a separate principle, nor a single property; but as Bichat calls it, "the sum of the functions which resist death." It is curious that the latter divided it into two kinds of life, *organic* and *animal*; though he only means two classes of functions. He does not mean that the living body is *endowed* with life; but that it is capable of certain functions.

IRRITABILITY.

Irritability has sometimes been confounded with life; and this gave rise to the "*fire*" of the Egyptians and the "*spirits*" of the old authors,—Galen, for instance. Van Helmont substituted an "*Archæus*" for it. Irritability is the faculty of perceiving a *stimulus*; while sensibility is the faculty of perceiving a *perception*; so that the former must precede the latter. If irritability stops short, it is *organic life*; if it goes on to sensation, it is *animal life*; if still further, it arrives at *thought*; as was settled by Pearson. Haller investigated the subject of irritability fully. Brown included it with sensibility, and called it *excitability*. Bichat divides it into organic sensibility, organic *insensible* contractility, and organic *sensible* contractility. Chaussier divides it into mobility and contractility. The "*irritability*" of some authors, is *morbid sensibility*. I use the term "*irritability*" as the capability of being affected by certain stimuli, and "*sensibility*" as being built on this. We know no more of elasticity and inflammability as abstract properties, than of this irritability. We only know them by their effects. It is the unknown cause of the phenomena of life; but we may investigate its *laws*, though we may not understand its *nature*. We know no more of *attraction*, as to its real nature; and once we knew as little of its *laws* as we now do of those of irritability; but its *existence* was not less certain than it is now.

We can distinguish bodies only by their properties; and irritability is well fitted to distinguish living beings. Dead solids consist of *proximate* principles; but it may not be so with the *living* body; which is perhaps composed at once of *ultimate* principles; for it is not acted on by the agents which affect it when dead. There is probably no fibrin, gelatine, or albumen in the body while living; but their constituents in a peculiar arrangement. This follows from denying life to be a substance; for how could gelatine, fibrin, and albumen, exhibit different phenomena at different times, if nothing were added during life, and withdrawn at death. Proximate principles are found in bodies which were *once living*; but that does not prove they existed in that form *during life*. It is found that all solids are formed of molecules; and so are all fluids when becoming solid,—coagulated albumen, for instance. Hence we *infer*

that *living* solids consist of these globules, but they have never been *found* in living tissues.

Even now there is a general unwillingness to admit the difference between living and dead matter. Thus Thomson says, that in the living body, chemistry and mechanics are under the direction of a "superior agent." Drs. Murray, Dewar, and others, make the same compromise. Murray speaks of "peculiar circumstances;" Dewar, of "new laws;" and Henry, of a "directing principle." Adelon embraces my view of the subject. The doctrine of definite proportions, for instance, is as foreign to the living body, as the "*angles*" of the old mathematical doctrines. In a *dead* animal, it is *mineral* chemistry, and not *animal* chemistry at all. Much less advantage than was anticipated has been derived from animal chemistry; though much was expected from it, and it has been ardently followed. Sprengel said long ago very truly, that physiology obtains no assistance from animal chemistry. We cannot tan gelatine *in the living body;* it is not amenable to chemical laws; in fact, there is no gelatine there at all.

Oxygen and hydrogen in the living body are easily accounted for, being conveyed in the aliment; but other things are found which are not so easily accounted for. Perhaps the principles which are thought to be simple, are really compound. We give off far more carbonic acid than we can account for. Whence is the carbon derived? The shells of eggs, and of the crustacea, and the existence of nitrogen in animals, and of copper in fish, cannot be accounted for, except by presuming that calcium, nitrogen, and copper are compounds. They are probably composed of ulterior atoms, over which the living body alone has the controul. This is called *vital* chemistry; and will be examined under the head of Secretion.

Whether irritability is inherent in every tissue of the body is doubtful. Till lately it was only allowed to the muscular tissue. It is quite certain that *sensibility* is inherent in only one kind of nervous tissue; and perhaps *irritability* resides in another kind. The distinction between the *solidum vivum*, and the *solidum mortuum*, is as old as Galen; the nerves being supposed to vivify all the parts in their neighbourhood, like the rays of the sun. Reil, Humboldt, Aldini, Heineker, and Lobstein, believed that a subtle *halitus* resided in the nerves, and formed a very mobile atmosphere round them.

The irritability of the lower animals, and of plants, is probably different from that of the higher animals; for they are insensible to the strongest stimuli—electricity and galvanism. Humboldt shewed this in the *dionæa muscipula*, and the *mimosa pudica*. But plants have diffused globules of nervous matter; and at the petioles of sensitive plants, we find globules identical with those of animals.

It was once thought that *voluntary* motion depended on the *cerebrum*, and *involuntary* motion on the *cerebellum*. They spoke not of *sensibility;* for this they suppose to be ready made, and to require only a stimulus from the brain. It has been shewn, however, that the brain and spinal marrow may be deadened by narcotics, or removed, or destroyed, without putting an end to involuntary motions, which seem, therefore, to be dependent on the *ganglionic* system. The following reasons may be adduced in support of this view. 1. The ganglionic system, is the first seen in the lower animals. 2. Monsters are never found without a ganglionic system; though they are sometimes without a brain and spinal nerves. 3. In embryos the ganglionic system is developed before the other. 4. It is larger in infants and in females; and they possess a greater share of irritability. 5. It is universally distributed. 6. Its structure is very analogous to that of the sensific nerves, of the posterior columns of the spinal marrow. 7. The nerves of this system have a particular structure in different parts. 8. There is no other use to be ascribed to them. We must examine each of these separately.

I. *The ganglionic system is the first seen in the animal scale.* This, however, is not a good argument; for wherever there is only one system, it is difficult to tell whether it is *ganglionic* or *cerebral*. No nervous system at all has yet been found in the *hydra*, the *sertularia*, the *echinus*, the *gorgonia*, the *medusa*, the *hydalis*, the *bothriocephalus*, the *tænia*, &c. The following are possessed of a nervous system:—the *asterias*, the *helix*, the *nuja*, the *actinia*, the *sepia officinalis*, or cuttle fish, (which has the first rudiment of a skull-cap, a cartilaginous case, inclosing nervous knots), the *aphrodita aculeata*, or sea-mouse, the *hirudo medicinalis*, the *lumbricus terrestris*, &c. All the foregoing belong to Linneus's class, *vermes*. A very similar arrangement prevails

among the *Insecta*;—as the *cancer*, the *aranea domestica*, or house-spider, the *acaris*, the *pediculus humanus*, or louse, *apis mellifica*, &c. In these are found cords and knots of nervous matter. As we rise in the scale, the nervous matter which was diffused through the whole gelatinous mass, becomes more separate and distinct. It is not wonderful that the limb of the polypus should live when cut off; for it has no sympathy with the other parts of the animal.

Do these nervous knots belong to the *cerebral* or *ganglionic* system? While the latter was unknown, they were referred to the former; but Bichat classed them in the ganglionic system. He forgot, however, that some of the animals furnished with these knots have voluntary motion and sensation. The first rudiments of a distinct nervous system, is a collar surrounding the gullet. This is analogous to the third branch of the fifth pair of nerves in man; for deglutition depends on it. Round any gullet there is a nervous circle too; but there being so many other organs there, we lose sight of it. Now this fifth pair is a cerebral nerve; and hence analogy would lead us to refer the first nervous arrangement observed in animals, to the *cerebral spinal* system, and not to the *ganglionic*. The great nervous trunk in the *Invertebrata*, is considered to be analogous to the spinal column; in the *sæpia* there is a rudiment of the skull; and in another of the same class, of a vertebral column. From the more perfect *Invertebrata* to the *Fishes*, the transition is not great; while their ganglionic systems are very different. An animal, as the *sæpia*, has been killed by removing the nervous knots; whence they do not appear to be ganglions; for Magendie removed the cardiac ganglion from an animal of a higher class, without any serious consequence being produced. Bichat, Ackerman, and Reil, say that the nervous centre of this system is ganglionic; while Bell and others say it is cerebro-spinal. The difference seems to be, that in the *Invertebrata* both systems are amalgamated; while in the higher classes they are separate, but connected by filaments. Fishes are the first to present a sympathetic nerve; but it is so minute as to be scarcely visible, and they have no ganglia; so that here would be a retrograde step, if the nervous system of the *Invertebrata* were ganglionic. This argument, then, is not satisfactory.

OBSERVATIONS ON CURVATURE OF THE SPINE, EXTRACTED FROM DR. BUREAUD RIOFREY'S WORK, ON PHYSICAL EDUCATION.

THERE are numerous works in medical literature on spinal deviations, but the attention of most authors appears to have been consigned to the study and treatment of this disease at such an advanced period, that if its cure be not impossible, it is at least nearly so.

Many practitioners among which may be numbered some of the most eminent, have made the diseases of the bones their chief study, yet these diseases are very often incurable, fine pathological descriptions are given; many cases are brought forward in all of which death has ensued; but no mention is made of the slight deviations which are generally artificial and very often imitative, without a material change of the organization, so that they have called forth the practices of the ignorant and given a tacit consent to all the tortures and fractures of limbs, more worthy an executioner than of any wise and thinking man; when they could so well promote the advantages of a rational education, preventing bad attitudes and bad habits.

It may be very important to know the diseased state of the spine, the alterations of the cartilages, of the synovial membranes, and of the cancellous structure of the bone, but is it allowing all? if science has but little power in these diseases, if only an important spectator of the now presented evil, is it not to be deplored that learned and eminent men have spent so much time in these Pathological researches, and lost sight of pursuits, far more important to the welfare of society? What would be thought of a medical man who passed his life in studying and describing minutely the pathological state of variola? How far superior and useful was the immortal Jenner, who discovered not only how to cure but how to prevent. If a physician who can cure is eminently useful, is the merit of the individual who prevents a disease, and consequently its results, merely trifling? But such is the human mind, that blessings are only appreciated when they no longer exist, that the sensation of pain is much more powerful and persuasive than the voice of science and reason. If physical education were well understood, if we could prevail on parents and tutors to adopt the necessary measures to regenerate, in early life the constitution of children either here-

ditarily or accidentally weakened, if in striving to facilitate the regular development of the organs, due care was taken that nothing should destroy their harmony; spinal deviations would be of very rare occurrence.

In uncivilized nations, among savages who lead what may be termed an animal life, deviations of the spine are unknown, such at least is the report of travellers, and naturalists; consequently to our habits, manners, and mode of life must be attributed, the various diseases that fall to our lot; the actual state of society, the injudicious education our children receive give rise to them.

If we direct our attention to the period of life when spinal deviations are made manifest, we shall quickly perceive that they are the result of our social state, and actual mode of education.

The great mass of poor who inherit misery, as the rich inherit affluence, comforts, and honors, are subjected to spinal deviations, arising from want of proper nourishment, raiment, and healthy habitations, when the wretchedness of parents engenders neglect of their children, diseases of the spine are very frequent, especially during the first seven years of life; after which children become useful, their occupations compel them to take exercise and they prevent continual confinement; and if they have carried loads beyond their strength, nature sometimes regains her sway: as the effects of exercise prove most salutary in curing spinal deviations, more especially if taken in the open air, it is a medical providence for the poor; but if children are kept in manufactories inhaling unwholesome air, partaking of bad nourishment, and compelled to work beyond their strengths; the deviations acquired in infancy are confirmed.

Spinal complaints among the poor so frequently arise in early life from want, the influence of external and internal agents, that they are equally common to boys and girls; while, among the rich, they are seldom known during the first seven years of life, and scarcely ever met with in boys; but in all classes of society the same constitutional predisposition to disease of the spine may exist.

When the inhabitants of large cities are debilitated by want, misconduct, disease, or too much hard work, their offspring must be naturally weak and sickly, and labour under every disadvantage, and receive a species of slow poison in the unwholesome milk that flows from the maternal breast. A proper degree of strength is not acquired, the frame is too weak to support the weight of the head and body, and the muscles lose the power of action.

But when luxury and dissipation have deteriorated the constitution of the rich, they provide strong and healthy females to nurse their infants; then good nourishment, combined with judicious care, improves the natural constitution.

Spinal deviations are almost unknown to the peasantry, who, though continually employed, work in the open air, cease their labour at sun-set, and their few wants are easily satisfied.

The principal causes of deviations among the poor are the state of the constitution, absence of proper nourishment, wholesome air, warmth, light, and exercise.

In the higher classes of society spinal complaints may chiefly be attributed to injudicious education, and want of proper attention to the physical state of children, who, from their infancy, are kept in bondage, either by ignorant nurses or governesses, who too frequently forbid the most innocent and healthy recreations.

Delicate children of six years old are made to sit for a length of time before a pianoforte on a music stool, without any support for the back, to learn lessons far beyond their juvenile understanding, writing and drawing-masters are then called in, and all seems to conspire against the freedom of their youthful victims. Thus, while the child of indigence is deformed through excess of labour, the child of opulence owes his distortion to the premature acquisition of talents neither conducive to health nor virtue. As the poor advance in age they are better able to fulfil their arduous duties, while a greater portion of time and attention is requisite to the attainment of accomplishment calculated to make the rich shine in society; thus slight deviations become incurable,

Spinal complaints may therefore be attributed to three different causes—constitutional weakness, acquired debility, and education. Having shown in what manner the two first causes should be treated, we shall examine the influence of education, The physical education of both rich and poor demands a considerable degree of attention. If it be contrary to all reason to make young children carry heavy loads, it is equally injudicious to subject them to attitudes

prejudicial to their full developement; but while the indigent act from necessity, and require the assistance of their elder children to take care of the younger ones, the opulent are guided by pride and vanity.

There are various sorts of spinal deviations; some are simple, others complicated, some are lateral, that is from left to right, or from right to left; others are anterior or posterior.

The lateral deviation to the right is the most frequent, and the cause of this deviation has been much discussed; it commonly takes place from seven to fifteen, when young people are subjected to positions which destroy the regular action of the organs.

Lateral deviations are found in all parts of the spine, the neck, the back, the loins; but they are most frequently observed in the back and loins.

Nearly all lateral deviations are slight and temporary. Shaw observes that some young ladies are crooked one day and straight the next, and that if immediate attention be not given, the injury becomes permanent, In our own practice we have seen instances of temporary deviations which were removed by friction, and proper attention to the digestive organs. We have already remarked that the lateral curvature might be double; when there is a curvature of the dorsal region, and that of the lumbax region is in an opposite direction: the height of the trunk is diminished, the functions of the lungs and heart are embarrassed.

There is sometimes a triple deviation, commencing in the loins in one direction, continuing in another in the back, and then to the cervical vertebra. In this triple deviation the pelvis is elevated on one side, while the chest is lowered on the other, the cervical deviation being formed to support the equilibrium of the head.

The lateral curvature on the left takes place in the same manner as the preceding one, and generally arises from the influence of the same causes.

The lateral distortion of the spine in children of the higher ranks, who spend much time at the pianoforte, is found in the lumbar region and in the lower part of the dorsal region. When a deviation of the lumbar region exists, the opposite shoulder rises: if the deviation be to the left, the right shoulder is elevated. When the cervical deviation exists, the body has a species of regularity. When the deviation is but slight, it may be presumed that the bones are not affected; the body of the vertebra and the cartilage are not depressed, nor the muscles unequal in power: there is then no pain on a pressure of the vertebra, and science possesses means for restoring the regularity of the figure by having recourse to exercises, attitudes, frictions, and internal means. When a distortion becomes apparent, the studies and exercises which may have given rise to it should be suspended; but we must not at present enter minutely into the means of cure developed in our work on *Diseases of Young Females*, but merely observe that, to prevent deviation, the constitution must be strengthened or modified; and children not allowed to remain in attitudes contrary to their regular development during growth.

The anterior curvature in the front is generally met with in children who have large abdomens, swelled joints, or scrofulous constitutions: these juvenile patients have a swinging walk, and are unable to bear fatigue. La Chaise observes that this mode of walking is common to young ladies wearing tight stays.

The front curvature is frequently met with in lame children, who strive to walk upright; but it is only common to scrofulous children, as the disease is generally situated in the lumbar vertebra.

The back curvature is of a serious nature, and is common to scrofulous children. It begins with teething; its appearance is always preceded by pain in the mis-shapened part of the spine, particularly when the patient is in an upright position, and there is pain on pressure in the diseased part.

The attention is attracted to this disease by ths appearance of two or three knotty protuberances, very painful when touched: they are sometimes only visible when the patient stoops. These curvatures are mostly angular, and indicate disease in the body of the vertebra. Scrofulous persons are most subject to them, but they sometimes owe their origin to bad attitudes, even where there is no predisposition to scrofula. If the position of lace-makers be observed, while they are working at their cushions, no doubt can exist as to the influence of attitudes, as young persons thus employed always stoop, and their figures are never properly developed.

This fact is confirmed by an observation in the Dictionary of Medical Sciences, where an instance is related of a young lady, about twelve years old, who was

very forward in her studies, and anxious to surpass her companions. She was always diligently employed, and continually leaning over a desk, either drawing or writing; her growth was rapid, but she could not stand upright: the spine was not diseased, but as the abdominal muscles were stretched, and could not regain their natural state; and an erect position was impossible.

Various examples might be brought forward to prove the influence of attitudes, but deviations are known to be so dependent on them, whether in weak or strong individuals, that it would be merely adding to the length of this work without any benefit to the readers.

It must be remembered that diseases of the spine are unlike all other maladies: if left to nature they are never cured, and without the assistance of art, they gradually increase until they become permanently incurable.

The cartilages lose their elasticity on one side, are developed on the other, and distortion is produced by a mechanical effect.

We cannot too strenuously urge parents to watch children's attitudes during growth, to strengthen their constitutions, to let them have full exercise in the sun and open air, and to allow them the free use of their limbs. If these precepts be not followed, slight deviations become serious, the spine diseased; and though science has been actively employed in tracing the cause of these maladies, and shewing their frightful results, yet she is impotent in effecting a cure when they reach that chronic state, which baffles all the powers of art and humanity. While giving a rapid sketch of spinal deviations, we have constantly borne in mind that this work is intended for mothers and governesses, not specially for medical practitioners. In our work on Diseases of Young Females, we have pointed out the means of curing deviations when there is no decay of the bones, or anchylosis, or fracture; and, though this work be not written for the Faculty, yet it may be consulted with considerable advantage by parents who wish to comprehend the rational treatment for particular cases. But if our instructions on Physical Education meet with proper attention, spinal complaints will cease to be so frequent. Slight deviations of the spine are at present very numerous, and when neglected, or injudiciously managed, become incurable, and often terminate fatally, while rational means, aided by a knowledge of physiology and anatomy, and particularly by the observations of the phenomena of growth, might be most successfully applied. In spinal distortions there is more than an inclination either to the right or left, there is pressure on the lungs and heart, the abdominal viscera are confined, there are compressed arteries, bad digestion; and the growth is arrested. But these phenomena can only be appreciated by practitioners who have studied these diseases, and are in the habit of treating them.

Essay on the Uncertainty of Medical Science, and the Numerical Method of M. Louis, read at the Medical Society of the University of London, November 25th, 1836, by Edwin Lankester.

At the present time, when such great facility exists for the promulgation and diffusion of knowledge of all kinds, and when so much knowledge must be gained before its bounds can be extended, it can I think hardly be expected that a student commencing his medical studies, can introduce to your attention original views of disease, or lay before you information that is not more or less familiar to all.

The object I have in view in the paper before me is merely to refer to a method of studying diseases that has lately been adopted by a physician on the Continent, and which appears to offer to the medical student an efficient means of studying his profession with success, and enabling him, by his individual exertions, to extend the bounds of medical knowledge.

The uncertainty of medical science has been in all ages and times a subject both of attack to the satirist and of regret to the philosopher. It has been said, "that almost the only resource of medicine is the art of conjecturing." In speaking of the duties of a physician, in watching and administering remedies in disease, a facetious writer observes, "Nature is fighting with the disease; a blind man armed with a club, that is the physician, comes to settle the difference. He first tries to make peace; when he cannot accomplish this, he lifts his club and strikes at random; if he strikes the disease, he kills the disease; if he strikes nature, he kills nature."

Although medicine has been cultivated by intellects of the highest grade, and has received at their hands the most un-

ceasing exertions; and although at the present period it has attained a perfection hitherto unknown, and is still advancing, it must be confessed that the charge of uncertainty is but too true. But by this admission I by no means wish to be thought countenancing the ribaldry of those who through ignorance or worse motives endeavour to represent the science of medicine as a system of fraud and deception.

Before proceeding to state the method pursued by M. Louis in his late research or inquiry into its efficiency to remove the uncertainties of medical science, I will endeavour to enumerate a few of the causes that have obstructed the progress and invalidated the conclusions of this branch of knowledge.

Medicine, like almost all other sciences, was in remote times practised as an *art*, and it would perhaps have been well had no efforts been made in its younger days to have rescued it from this humble sphere of action. At this time it consisted of a mere collection of facts, with regard to the application of certain remedies, for the removal of diseased conditions of the human frame. But as soon as learning arose among mankind, and the reasoning faculties cultivated, they directed their efforts to the task of discovering the causes from whence the effects of medicine on the human frame proceeded.

This desire of the first cultivators of philosophy, to discover the fixed principles of action in the objects around them, was the commencement of all our knowledge; but the great error into which they fell was that of drawing conclusions too hastily from insufficient data. The consequence of this was, that directly medicine was patronised by the learned, attempts were made to account for the various phenomena of disease by the operation of certain fixed laws. It is not my intention here to go into the history of medicine, as it must be evident to all how injurious the effect of such a system of prevalent induction must have been to the interests of the science they were intended to promote.

Every observer thought himself competent to frame a code of laws or hypothesis by which he could explain the phenomena he saw. Hence arose a multitude of sects who followed and acted upon the peculiar views of some favourite leader.

Each sect, instead of testing the value of their doctrines by the facts that came before them, was only desirous of confirming their own views; and thus medicine in the early ages was effectually prevented from making that progress which its numerous and talented cultivators seemed to promise. These consequences, however, the necessary results of the first efforts of the human mind to seize upon the great principles of truth.

Nor was it medicine alone, among the sciences, that was retarded by this anxiety to generalize amongst ancient philosophers, but every other branch of knowledge participated more or less in its ill effects. Yet still many of the Greek and Roman writers have handed down to us valuable practical principles in the arts and sciences, and especially that of medicine.

After the decline of learning amongst the Greeks and Romans, medicine found a refuge with the other sciences among the mystic Arabians, who did little for its permanent and solid advancement.*

In the 17th century, Bacon first inculcated the great principles of his inductive philosophy, in which he insisted on the necessity of receiving no theories as true that were not founded on an extensive observation of carefully collected and arranged facts. The strict adherence to this principle gave an immense impetus to knowledge; and although all collateral sciences were greatly advanced, medicine still dragged on with slowness and uncertainty.

On the revival of letters in England the works of Galen and Hippocrates, and other old writers, were anxiously read and their opinions were adopted without any reference to the facts on which they were founded. Medical men were still divided into sects and parties, each of whom strove rather to invalidate the opinions of their opponents than to test the truth of their own. In a science like medicine, where the facts must be so extensive, and the labour of collecting them consequently so great, this prevalence of hypothetical knowledge is not much to be wondered at.

Up to the present time, although medicine has received many great improvements by the exertions of talented individuals, it has suffered for the want of that strict application of the principles of Bacon that has done so much for every other science.

That this assertion is correct may

* They added some remedies to the already too prolific list of materia medica.

easily be proved by the various theories of disease that have prevailed up to the present time. Before the time of Cullen there had been no attempt to take facts as the ground work of theory, and the previously prevailing doctrines of the school of Boerhave only pretended to be the eclectic system, or a selection of the best points of all previously prevailing opinions. Cullen called the attention of medical men to the importance of collecting facts; but at the same time he proceeded to speculations not warranted from the existing state of knowledge or his own observation of disease; and these views have more or less influenced the great mass of medical practitioners to the present day. The theory of Brown and its celebrity proves the great readiness that exists in the minds of medical men to embrace theoretical views of disease without sufficient investigation of the evidence on which they rest. In our own time the adoption of the views of Hahneman on Homœopathy in this country, and the belief in animal magnetism on the Continent, are remarkable confirmations of the statement that doubt and uncertainty prevail to a lamentable extent in the science of medicine. The followers of Broussais are also men who have embraced the dogmata of an intelligent and highly gifted theorist, as the induction of a sound and philosophic investigation of facts.

In such instances as these how often have we to lament that the genius and researches which might otherwise have adorned the profession to which they are devoted, have become not only the means of obstructing the progress of knowledge, but the instrument of inflicting an extensive curse upon mankind.

This desire then among the cultivators of the healing art to possess certain fixed principles, which they might apply to the explication of the phenomena of disease, must be reckoned amongst the first causes that have served to retard the progress of medicine.—It has been the parent of *prejudice*, than which nothing can be conceived to have so injurious a tendency on the minds of the followers of science. It leads them to lay aside that laborious collection of facts, and that dependence upon *experience* alone which must ever be the foundation of all true knowledge.

The perfection of science depends upon the accuracy with which we can trace the relation of cause and effect. There is no department, perhaps, of medical science that exhibits this principle so well as those lesions of the viscera of the thorax, which are detected by the aid of the stethoscope. This is one of the improvements that modern medicine has to boast, and a splendid instance of what may be done for medicine by patient observation of the relation of cause and effect. But medicine is not fortunate enough to possess in the varied phenomena of disease so ready a mode of tracing effects to their true causes. An example of this may be given in fever. How little we know with regard to its true cause; the real state of the system in which it originates; and what symptoms and lesions are primary, and what secondary. Are we to believe, with Cullen, that it arises from constriction of the capillaries; or with Brown, that it arises from general debility; or with Clutterbuck, that its cause is inflammation of the brain; or with Broussais, that it entirely consists in inflammation of the mucus membranes of the stomach and intestines. The complicated constitution of the human frame is undoubtedly one great cause of the uncertainty of these and like questions. If we look at the body of man we find it composed of numerous tissues, each having a structure, a physical and chemical constitution, and performing functions peculiar to itself. From the tissues are formed various organs, each possessing peculiar features, performing peculiar functions; yet all so connected, that one part cannot suffer without exciting sympathy more or less extensive throughout the the whole system. Then comes the potent influence of the mind over all, increasing, suspending, or modifying the varied actions of the living solid. The body also varies in the phenomena it presents, according to age, temperament, sex, external circumstances, education, &c.

The phenomena presented by a being thus constituted are almost endless, and to trace every action to its true cause is a task at present of insurmountable labour. These difficulties have undoubtedly been one cause of the anxiety displayed by medical men to grasp at hasty and ill-formed conclusions.

Another cause is the imperfect state of our physiological and pathological knowledge. Although these departments of science have made, and are still making immensely rapid strides, it must still be confessed that many of the phenomena,

both of the healthy and diseased frame, are but little understood. How does mercury act in subduing inflammation? Why is lemon juice a specific in scurvy? Why does cantharides act upon the urinary organs? Why are tubercle and carcinoma incurable, whilst glandular swellings are easily dispersed? What peculiar change takes place to produce the cupped blood in inflammation? What are the morbid lesions in epilepsy, tetanus, chorea, or hydrophobia? What are the causes of idiosyncracies, and the varied constitutional tendencies of individuals? These and like questions still occur to the practitioner, and offer a barrier to his further and more minute investigation.

But should we be fortunate enough to trace effects to their true causes, and know the exact nature of the changes produced on the system by remedies, we are still thrown back in our inquiries by the want of exact resemblance between the features of two diseases. All the varied influences of age, sex, habit, disposition, temperature, &c. of every individual, come in to disturb the congruity of any two symptoms or set of symptoms. Our want of accurate knowledge on the modifying influence of these various circumstances is a fertile source of difficulty.

Again, the progress other sciences have made, depends upon the facility with which they can have recourse to *experiment*. The chemist can easily test the truth of any theory that may be brought before him, by bringing about the actions which the theory is intended to explain; and thus he has a ready mode of determining the truth or falsehood of any assertions he may be called upon to believe. This is also the case with most other branches of natural philosophy; and *thus* these sciences are pursuing their way clearly and steadily to the ultimate end of all science, the elucidation of the great laws that govern the actions of the material universe. But medicine, more especially pathology, is a science of passive observation alone. In most of our investigations we are prevented from having recourse to active observation or experiment by the nature of the materials whose actions we wish to observe. To be sure, the bodies of animals offer us opportunities for performing experiments, and great advantage has been taken of this; but the want of strict analogy between the constitution and organization of the human and other animated beings must render us very cautious how we reason from one to the other; and, in most instances, the dissimilitude of the two renders it quite impossible to produce those phenomena in the one that takes place in the other. Thus circumstanced, the deductions of medical men ought to be the result of observation the most extensive, and of facts the most indisputable, that labour and accuracy can accumulate.

The medical profession also suffers materially by a want of reliance on testimony. The credibility of the narrators of facts, and the confidence placed in the accuracy of the observations of individuals more favoured by circumstances than others for the investigation of phenomena, has a considerable influence on all sciences; and in no science is this confidence so much required as in medicine. Yet, from the operation of a variety of the above causes, there is no science where related facts are of so little value, and testimony so much to be doubted as in medicine. Medical men, in observing phenomena, too often look through the colour of *prejudice*, and their observations partake too much of the medium through which they are looking.* I have heard a Professor in this university state, as the result of his own observation, that the followers of Broussais on the Continent, rather than not find congestion of the mucus membranes after death in fever, will ingeniously scrape blood into the pale and empty vessels by a dexterous twist of their scalpels. Our own medical journals will also afford abundant proof that the history of disease and *post mortem* appearances are often given to confirm the views of the writer than to afford a clear and impartial account of the nature of a disease. Such things as these are as unworthy the members of a liberal profession as they are derogatory to its character and worth. Not only are facts inaccurately observed and stated, but they are often altogether imperfect. Mons. Chaponiere, in his Essay upon the Causes and Seat of Neuralgia of the Face, says, that out of above 600 cases that he had found related, he could only avail himself of 250, the rest were so defectively reported.

But not only have we imperfection,

* Some even go further than this, and resort to mere trickery to substantiate their peculiar views.

inaccuracy, and distortion of facts, but we have mere statements given in the place of facts. A person has syphilis, he takes mercury the syphilis is cured; now these are facts, but it it also stated as a *fact* that the mercury cured the syphilis. Again a person has secondary syphilis; he has taken mercury, an undoubted fact; but it is also stated as a fact that the mercury caused the secondary symptons.

In another case a man has scarlatina, he takes the quintiltionth of a grain of extract of belladonna, three times a week for a fortnight, he gets well, all facts; but now comes the assertion which we are told we must take as a fact; that the disease was cured by the belladonna. Less absurd instances of this false induction, might be given from the writings of those who have a high reputation in our profession for skill and ability; and which every one must regret, as it lays the profession open to those charges of quackery and empiricism which it often justly heaps on others, but is not free from itself.

Mere opinions too, often grounded on the slighest and most insufficient evidence are put forth to the world as facts. A woman comes into an hospital with a hard glandular swelling, the surgeon examines it, pronounces it cancer; the woman takes iodine and is cured, and the case is trumpeted forth as one of cured cancer. A man has a sore on the genitals under suspicious circumstances it is called syphilis, he gets well without mercury and another fact is added to confirm the opinions of anti-mercurialists. One would think at the present time of day, such a plan of procedure ought not to be followed by any enlightened practitioner, but I fear that the annals of both public and private practice will be found to abound with such proceedings*.

Another source of fallacy and error in medicine, and the last I shall mention is the use of inexact, and inaccurate terms. In the reports of cases that are published, we are often at a loss to know what the writer means, and whether you understand the terms he has used in the same manner as himself. In other sciences glossology forms an important department, but in medicine little has been done for the introduction of more exact modes of expression. How often is "congestion" reported without a single adjective modification. It might only occupy the veins, or arteries; or the capillaries might be filled; or the part might be tinged with blood, bursting out at every pore of integument, but all this must be guessed at. Softening of organs is in like manner frequently given, without any idea of the extent to which it has taken place. Many other states are given in the same inaccurate manner.

These then, are some of the causes that tend to render medicine an uncertain science. That they are great and powerful barriers I will allow, but that they are insurmountable I cannot admit.

When we look around upon what is doing at the present time in medicine, we cannot but be cheered with the prospect that it offers, of placing the profession we have embraced upon a surer and more exalted basis. The ranks of our profession we could always boast the possession of men, distinguished for their talents and intellectual attainments; and at no period of the history of medicine has it possessed more able cultivators than at the present day. Men who are fully aware of the difficulties that surround them in the practice of their profession, and are earnestly desirous of removing from it the causes of uncertainty. To no man probably in after times will medicine find itself more indebted than to the patient, indefatigable, and philosophic Louis, who has been justly called "the first Physician in Europe," and is the author of that system of investigating disease, that I shall now lay before you, and which I think calculated in a great measure to remove from medicine much of its present uncertainty.

Louis practised for sixteen years of his

* In sciences, were numerous facts are necessary to establish the truth of general laws, and to point out legitimate conclusions, a system of combination amongst individuals is pursued, by which the amassed experience of all may be investigated, and those deductions made that are consonant with the facts observed. Now this is never resorted to in medicine. A young man commences the study of medicine, he finds little value in what is written by others, and observes for himself; by the time he is old, he thinks he has had a tolerable share of experience, and forms many conclusions from what he has seen; but these conclusions and the grounds on which they were formed are doomed to exist with himself. In this way much valuable experience is probably unrecorded, and must be reckoned as another cause of the slow progress of medical science.

life as a physician in Russia, at the end of that period accidental circumstances brought him to Paris. Here he became the follower and admirer of Broussais, but he was not long before he discovered, that although Broussais clearly proved the errors and false conclusions of other theorists, he was himself far from being correct in his own views. Perplexed with uncertainty and doubt, and anxiously desirous of pursuing some line of research, by which he might resolve the difficulties by which he found himself surrounded; he determined to devote himself entirely to the investigation of the phenomena of disease. He saw that the foundation of all true science rested upon facts alone. He beheld in the theories of others, and he felt in the conclusions of his own mind, that much rested upon mere assertion, and that the data on which they were formed were to be looked for in vain. With these views he gave up all private practice, laid aside all preconceived opinions, became a clinical clerk in la Charité, and for seven years devoted himself to a careful, laborious, and detailed collection of the phenomena of disease. The facts be observed were carefully arranged in a talented manner, so that any time he could submit them to the operation of numerical comparison. From the facility thus afforded of valuing and comparing symptons by the use of *figures*, he has called it the "numerical method."

Louis does not pretend to be the discoverer of this system of stating facts, but he has undoubtedly the merit of being the first to apply it in an extensive manner to the observation of disease.

I will now endeavour to explain in a brief manner, the mode of observation adopted by Louis. It consists of two distinct operations, 1st, the collecting of isolated and individual facts in their proper connections and relations; and 2ndly, the inquiry into general facts, or the deduction of general laws from the relations of any number of individual facts.

In the first department, it is necessary that every fact that can bear either directly or indirectly upon the case should be known, and not only must positive symptoms be observed and accurately noted, but also negative symptoms; unless the latter are equally regarded with the former, reports of cases lose their analogy, and no accurate comparison can be instituted. The points to which attention here must be directed, are the age of the patients, their profession or trade, their habitual state of body, whether thin or stout, &c. their state of bodily power, whether weak or strong; their previous state of health and disease; all the circumstances of which must be observed and noted. Their state of organization, whether perfect or imperfect. The next point must then be to determine the period when the disease made its attack. This must be accurately enquired into, as the true organ of a disease can only be attained by connecting the period of attack with the previous habits and circumstances of the individual. The symptoms of the disease must next be considered, and the precise order in which they have occurred, should be accurately traced. On this point, the replies of patients to questions must not be relied on, but a rigorous system of cross-examination pursued, that the real truth may be arrived at. In the next place, a rigid enquiry into causes predisposing and exciting, must be instituted. Here it is necessary that the prejudices of the patient should be set aside, and that a naked and clear view of the real state of their habits, circumstances, and conduct should be obtained. Cases often terminate fatally, and with the object in view of gaining as true and clear an exposition of all the phenomena of disease as possible. Louis insists on the necessity of accurately examining every lesion to be found in the body after death. All the viscera must be examined, and *every lesion* noted. An inspection of a *part* of the body will not suffice: the investigation would be incomplete, and the report of such a case would be comparatively valueless. The necessity of such an entire examination of the viscera of the body is well illustrated by the interesting discovery of Louis, that the existence of chronic peritonitis after the age of fifteen always implicated tubercular disease of the lungs. Now this could never have been ascertained but by the examination of both the viscera of abdomen and chest; and points out the fallacies that must arise from a partial inspection of the bodies of the dead. These facts having been collected, must be carefully arranged in a tabular manner. Each organ must have a column, which must also be divided into several compartments so that room may be given for the record of all the facts observed; and the more minute these are, the more valuable these cases become.

These then are the necessary prelimi-

naries to the second part of Louis's system, or what may be more strictly called the numerical method, or the inquiry into general facts.

In the first instance, every fact must be removed that cannot be relied upon as perfectly free from inaccuracy, and all those that are trustworthy must be analysed without distinction. These facts must be collected upon the principles already stated, and arranged according to their progress, duration, order of succession, and the different circumstances under which they have been developed.

The facts having been thus classed, each function, each symptom, and each organ must now be followed through all the facts collected. This is necessary, as there are so many lesions, and affections of various organs, occurring in every disease, that it can seldom be said one symptom forms the character of a disease. The point then next to be determined is the value of each particular symptom or lesion that has been observed in the collection and arrangement of any number of cases accurately reported. The mode generally adopted by medical writers in this case has been, to express in the equivocal term "*more or less,*" the value of these symptoms. But it must be evident that this conveys little or no information at all.

Does the symptom or set of symptoms occur in 40, 50, 60, or 70 cases out of a 100? It is not stated, and therefore we are in general ignorant as to the real value of a symptom, and when a series of symptoms are given there are no means afforded whereby we can discover whether they have all the same value or not. For instance, Cullen, in his definition of hepatitis, says Pyrexia pain and swelling of right hypochondria dull heavy pain at top of right shoulder, difficulty in lying on the left side, dyspnœa, dry cough, vomiting, hiccup.

Now here a student must be quite at loss to know what value to attach to these symptoms. Do they all occur in every case of hepatitis? If not, which are most frequently absent, and what is the precise diagnostic value of each. We are not informed, and no method but that pursued by Louis can give us the information we seek. Again—Certain symptoms are called *common,* but to discover how common, no means have hitherto been generally pursued. By arranging, however, the facts in a tabular manner, and counting them, we have an easy method of gaining the exact information sought. This then is the numerical method of Louis the principle of it is so simple, that the bare statement of it is sufficient to explain its whole mechanism.

The advantages that would result to the profession from an extensive adoption of such a system of investigating disease is very apparent. Not only is it applicable to the determination of the value of particular diognostic symptoms, but it would also point out the relative frequency of any particular symptom in those affections, of which it is not the constant accompaniment. The degree of severity of a symptom and the age, sex, constitution and habit in which it occurs might be known with numerical accuracy.

In the treatment of disease the same method must be of inestimable service. It would give to medical men the means of accurately ascertaining the value of any particular remedy or cause of treatment. How many of the fallacies in the science of therapeutics might we not expect to see exposed by the introduction of a diligent system of collecting facts and deducing from them *only* their legitimate conclusions. Is it not probable that it would soon rid us of absurd hypotheses on the action of medicines, and relieve the mind from the harassing anxiety of not knowing what course of treatment to pursue? Being in possession of the numerical value of any course of treatment, the practitioner would no longer hesitate, as to whether he should bleed or give medicine in intermittent fever, or treat syphilis with or without mercury, or administer calomel or gum-water in enteritis.

There is no department of pathological inquiry but its precision and value would be enhanced a hundred fold by the strict adoption of this method.

The progress and mean duration of diseases for which there is no accurate data existing, might be thus determined. All the varied influences of climate, situate in age and sex, upon these circumstances might also be known.

By the results of such a method too, how much the uncertainty of *prognosis* would be diminished.

It would be equally valuable in etiology by demonstrating the value of preconceived opinions, and presenting the causes of disease in their relative value, it would remove from the department of medicine, the difficulty of determining the real origin of many lesions of the body.

In fine, this method is calculated throughout the whole course of investigating the complicated phenomena of disease to give that precision, clearness and accuracy to the varied facts and conclusions of the medical practitioner which he has so long wanted and of which he has so constantly felt the necessity.

I do not wish however to represent this system alone as a panacea for all the evils in medicine; I think it is calculated to remove much of that uncertainty, the causes of which I have previously noticed.

But there are some, here, who will probably inquire what have been the results of this method in Louis's hands. The only results I have seen of Louis's investigations are those given in his work on Phthisis, and here almost every page confirms the value of his method. To give all his conclusions would be to give his volume. I shall select a few of the most important. Louis's observations were made upon 1960 cases of phthisis, of these 450 died in the hospital, but from inaccuracies of various kinds, he did not feel himself justified in taking more than 123 cases as the data of his observations. In the course of the work he refers to several hundred cases of other diseases as offering negative proofs of many kinds.

In the first instance it has often been asserted, that phthisis may arise from other causes besides tubercles, constituting granulated melanotic, cancerous, and other kinds of phthisis; but Louis asserts that, in every case of phthisis, he found tubercle the cause. He found that tubercles generally developed themselves at the summit of the lungs, only one exception in 60 occurring. He found acute phthisis to be more frequent on the left side than on the right, in the proportion of 28 to 10. In all his cases he never saw a single lung in which cicatrization had taken place after tuberculous ulceration. In no other disease* but phthisis has he found ulcerations of the trachea, larynx and epiglottis, in one-third of his cases the trachea was ulcerated, the larynx and epiglottis in one-fifth. In five-sixths of his patients he found ulceration of the small intestines, and in the same proportion in the large intestine. In 85 cases of other chronic diseases, three only were found to have ulceration of the small intestines, and six only ulcerations of the large intestine. In one-twelfth of his cases, the stomach was greatly enlarged, whilst in other diseases but three cases of such enlargement were seen out of 230 cases. In one-fourth of his cases there were tubercles of the mesenteric glands, and in no individual who had tubercles of any glandular structure after the age of 15, did he fail to find tubercles of the lungs. In fact, tubercles were never found in any organ after that age, but it involved their presence in the lungs, and only one instance was tuberculous matter more advanced in other parts than in lungs. Fatty degeneration of liver occurred in one-third of the examples, and out of 230 other cases, only two instances of this lesion were found.

Many more examples might be given, but these I think will be sufficient to prove, that medical science has already derived some important facts from the use of the numerical method, and that it may look with confidence for others equally valuable in every department of its extensive range of inquiries.

To suppose that such a plan would be put forth to the world without objectors, would be too much to expect from those who are wedded to the old systems because they are old, and who rather than give up their favourite dogmata, or exert themselves beyond the ordinary custom of their lives, will oppose any system that might interfere with their prejudices or their indolence.

It has had its opponents on the continent, and should it be adopted in this country, it will probably have to contend with similar opposition.

Some may object that it is too laborious, and requires more attention than can be given by the great body of practitioners. It is true that this would form an obstacle to its being adopted in every case a medical man should attend. But there is no occasion to apply it to all cases; let every practitioner select a disease, or a few diseases of the same kind, and give to the profession the result of his observations, we should soon then collect a body of evidence, that it would be impossible for the efforts of an individual ever to accumulate. In such a united effort as this, there would be admirably exhibited, the advantages that can accrue to society from the combination of individual exertions. It is to such efforts that all the improvements in science and art stand indebted. And surely there are few

* Chronic diseases are here alluded to, and syphilis is excepted.

members of the medical profession, so dead to the higher and nobler aims of of their pursuits, as to hesitate to forfeit a small proportion of ease for the best interests of humanity.

Again, it may be objected that the method is too mechanical, and would leave the mind unoccupied, suffering it to rest on the mere collection of facts on paper. This objection would be very well, provided the mind could come to right conclusions without the aid of collected facts. But this seems to be next to impossible. Perhaps the most remarkable of Louis's assertions is, that whenever he had founded an idea of the general result of his facts, previous to counting, then he invariably found he had come to a false conclusion. Louis does not appear to be the most likely man to be thus cheated by his senses; and this confession affords a strong argument in favour of a system that would prevent the medical man from being biassed by the conclusions of a false judgment.

Some, again, will feel disposed to say, that, from the very nature of medicine, it is impossible to reduce it to the rank of a true science. To this I would answer, that it is as possible for the mind of man to have the relation of cause and effect in one series of action as in another. One class of phenomena may be more difficult to investigate than another; may be more complicated than another; but nothing that can be brought under the notice of the senses of man can be said to be beyond the sphere of his investigation or inquiry into its causes and true relations. The mind of man has been capable of giving laws to the relations of objects the most distant from his senses that the mind can conceive; and if the astronomer has thus succeeded, surely it is not too much to suppose that the medical philosopher may equally give laws to the relations of bodies infinitely more accessible to the apprehension of his senses.

I have thus, gentlemen, endeavoured to lay before you some of the more prominent causes that obstruct the advancement of medicine as a science. I have also given you an imperfect sketch of a plan of investigating disease, and recording the results of observation that appear well adapted to remove from medicine many of the evils of which we have complained. You will at once see how strong are the claims of this method of Louis's to your attention. It has its difficulties; but its advantages far outbalance them; and I hope I may not have been altogether unsuccessful in exciting the desire of some to candidly inquire into its merits. If I should not have succeeded in this, I can assure you I feel myself amply repaid for collecting materials for this paper by the direction of my mind to the more immediate and intimate examination of the subject to which I have endeavoured to draw your attention.

MEDICAL EXAMINATION FOR M.D. AT EDINBURGH.

EXACT details of the actual questions put at examinations for diplomas, or for licenses to practise, have always possessed great interest for students. And not without reason; for, although when it comes to their turn, the same questions (in all probability) will not fall to their lot, yet they serve to indicate the general scope and tenour of the inquiries pursued on such occasions; and as such they afford a valuable guide, and inspire a salutary degree of self-possession in the view of the approaching ordeal, as well as in the moment of actual trial. We feel assured, therefore, that the following account of an examination at Edinburgh, will procure for us the thanks of all expectant candidates for the highest medical honour:—

DR. MONRO.

What is mastication?

By what muscles is it effected?

Which is the strongest of them?

Are these muscles stronger than those of the hand?

How is their greater strength proved?

What is the action of the *temporal* muscle?

Describe the origin and insertion of the *masseter* muscle.

What use does the *buccinator* muscle fulfil?

Enumerate the salivary glands.

How does the parotid gland discharge its secretion?

What is the course of Steno's duct?

Opposite what point does it open?

Are its coats thick or thin?

Are they thinner or thicker than those of the submixillary duct?

What is the composition of the saliva?

How is the food passed into the pharynx?

What muscles pass between the chin and *os hyoides?*

What muscles arise from the styloid process?

How do the *stylo-pharingei* act on the pharynx?

What muscles raise the *os hyoides?*

How is the glottis closed in swallowing?

If the epiglottis is destroyed, how is the rima glottidis closed?

What muscles are engaged in this process?

How are the posterior nares closed in swallowing?

What muscles are concerned?

What are the muscles of the pharynx?

Give the origin and insertion of each.

Are the fibres transverse or oblique?

What effect does their obliquity produce?

What openings are there into the pharynx?

What is the structure of the pharynx?

What is the structure of the œsophagus?

What is the course of its muscular fibres?

Describe the structure of the gullet in the *ruminantia*.

To what kinds of stricture is the gullet liable?

How do you distinguish paralysis from spasm of the gullet?

How may the œsophagus be otherwise obstructed?

Which is the most common seat of organic disease?

Which is the next most common seat?

How are organic strictures to be treated?

What is the length of the bougie required in stricture of the upper part?

How long should a bougie be to reach the stomach?

What is to be done in spasmodic stricture of the æsophagus?

What would you make your injection of?

In how much water would you infuse a drachm of tobacco?

If you were to give two drachms, what might happen?

What other antispasmodics might you give?

How many drops of laudanum would you put into the injection?

What is the nature of the organic stricture?

Is hypertrophy of the submucous cellular tissue the most common?

What is the most common form?

How long may spasm of the gullet last?

DR. GRAHAM.

You have spoken of laudanum;—what is it?

From what plant is opium obtained?

What is the botanical name of that plant?

To what class and order does the *papaver somniferum* belong?

What is its *natural* order?

From what part of the plant is opium obtained?

Are the *ripe* capsules ever used?

Do the *seeds* contain opium?

What *do* they contain?

Is olive oil ever used as a purgative?

What quantity would you give for a dose?

What plant yields assafœtida?

Where does it come from?

From what part of the East?

How is the assafœtida obtained?

What kind of a plant is the *ferula assafœtida?*

To what class, order, and natural order does it belong?

What are the characters of the *umbelliferæ?*

How does *sambucus* differ from them?

How is a cyme distinguished from an umbel?

How does the fruit differ?

What is a capsule?

How many seeds have the umbelliferæ?

What principle do they contain?

Besides the carminative, what other principle is got from them?

What narcotic plants are there in the umbelliferæ?

To what class and order do the umbelliferæ belong?

What plants contain camphor?

What is the officinal plant that yields it?

You were reading about vegetables;—where is *brassica* placed by Linnæus?

What are the characters of the class *tetradynamia?*

What is the natural order of brassica?

To what class and order do the *solanæ* belong?

How many classes has Jussieu?

How are they distinguished?

DR. HOPE.

How are the earths divided?

Which are the *alkaline* earths?

Are they soluble?

Which is the most so?

Is lime more soluble in hot than in cold water?

Is it the same with *baryta?*

If you make a hot solution of baryta, what occurs on cooling?

In what form is the baryta deposited?

Can you crystallize lime in this way?

If exposed to the air, what change does lime undergo?

How, then, can you crystallize it?

What substance would you put under the receiver of the air-pump, to absorb the moisture?

What are the characters of an alkali?

What properties has it beside that of changing colours?

Which is the heaviest of the alkali earths?

Which is the next?

How do you distinguish *strontia* from baryta?

How do you colour flame with strontia?

What salts of strontia would you use?

How is baryta obtained from the *sulphate?*

If the sulphate be heated with carbon, what occurs?

What takes place when the *sulphuret of barium* is put into water?

If *sulphuretted hydrogen* be mixed with *nitrous acid,* what occurs?

What principle does nitrous acid contain which it readily parts with?

What does it take from the sulphuretted hydrogen?

What do they form?

What remarkable phenomenon attends their union?

What becomes of the sulphur?

DR. ALISON.

Enumerate all the sensific nerves in the body.

Do all these impart *common* sensibility?

Which of these convey *specific* sensibility?

What is the eighth pair of nerves?

Is it not also sensific, as well as respiratory?

Do we not also know the same fact practically?

What is the effect of dividing the par vagum?

What would that effect show?

Whence do the lungs derive sensibility?

Is all the brain necessary to sensation?

Is all the brain necessary to voluntary motion?

What part is supposed to preside over motion?

What is the course of the fibres from the *corpora olivaria?*

What fibres meet them at right angles in the *tuber annulare?*

What is the effect of cutting one of the *crura cerebelli?*

What four bodies surmount the *pous varolii?*

Which of them have relation to the olfactory nerves?

Does the size of the testes bear a relation to that of the brain, or to that of the spinal marrow?

What animals have them very large?

How far may we cut into the brain without destroying life?

DR. HAMILTON.

What changes occur in the situation of the ovaries and Fallopian tubes during pregnancy?

What change takes place in the ovaries?

What change takes place in the Fallopian tubes?

Where is the *antrum* of the Fallopian tube?

What are the symptoms of pregnancy in the early months?

What period is meant by "the early months?"

In the latter months what are the signs?

How is pregnancy distinguished from other changes in the uterus?

Beside the stethoscope, what is an infallible test?

What are preternatural labours?

What is the first order of that class?

May the second order be left to nature?

What is spontaneous evolution?

How is the presentation ascertained?

What is the cause of preternatural presentations?

If the arm presents, may it be pushed up to allow the head to descend?

Why may it not be done in general?

What is the operation of turning?

Why do you stay with the patient for an hour after delivery?

What is the object of binding up the patient?

DR. THOMSON.

To what diseases is the heart liable?

What are the *functional* diseases?

What are their causes?

What are the *organic* diseases?

What is inflammation of the pericardium?

Does it extend only to the pericardium itself?

What is it called when it extends to the layer covering the heart?

How may pericarditis terminate?

How many kinds of effusion are there?

What is effusion of water called?

What other name is applied to it?

What morbid changes occur in the *substance* of the heart?

To what diseases are the *parietes* liable?

What diseases may affect the *cavities?*

What are the signs of *hypertrophy* of the heart?

What are the signs of *dilatation?*

Are they ever combined?

You are acquainted with the writings of Laennec?

What is his explanation of *sounds* of the heart?

Who first broached the new views on that subject?

DR. HOME.

What is epilepsy?

What are its symptoms?

How is it distinguished from hysteria?

How is a true fit distinguished from a false one?

What are the symptoms of hysteria?

What immediately precedes the fit?

What course does the *globus hystericus* take?

What immediately precedes a fit of epilepsy?

What course does the *aura epileptica* take?

What is the treatment of epilepsy?

What is given in the interval of the fits?

What medicines derived from the *mineral* kingdom are administered?

How is oxide of zinc prepared?

What doses would you give?

How is ammoniuret of copper prepared?

What phenomenon takes place during the trituration?

How is ammoniuret of copper prescribed?

How many pills would you give?

MR. TURNER.

What is retention of urine?

From what causes may it arise?

How many kinds of stricture of the urethra are there?

Which is the most common seat of *organic* stricture?

Which is the next most likely situation?

Are they common between the bulb of the urethra and the prostate gland?

What are causes of paralysis of the bladder?

What measures would you adopt in organic stricture?

What plan would you pursue in paralysis of the bladder?

Before using the catheter, what means would you employ?

What is considered a good way of applying fomentations?

What would you do after drawing off the urine?

What form of counter irritation would you adopt?

What is the state of the living membrane of the bladder in such cases?

How is its condition indicated?

What is the state of the urine?

What is the state in health?

What gives rise to the change?

What essential oil is recommended for enemata in retention of urine?

LIFE OF JOHN HUNTER.

(Continued from page 355.)

In consequence of the death of Mr. Middleton in the year 1786, Mr. Hunter was appointed deputy surgeon-general to the army. His work on the venereal disease was now published, and had been long expected by the public. He also collected his papers printed in the Philosophical Transactions, and obtained the sanction of the president and council of the Royal Society to reprint them; he published them under the title "Observations on certain parts of the Animal Economy." This work had a very large sale, and is one of authority and reference. It deserves to be stated, as it shews some of the peculiarities of the author, that *he had his works printed and published in his own house, were they were also sold,* but finding this proceeding to bear hard on the booksellers, in a way, which had not been previously explained and which was not intended; the second editions were sold by Mr. Johnson, of St. Paul's Church Yard, and Mr. Nicol, in Pall Mall. About this period Mr. Hunter was seized with a most alarming illness, the symptoms of which we shall describe hereafter, and now content ourselves with Sir E. Home's account:—

"In the spring of this year,* he had a very severe illness, which confined him to his bed, and rendered him incapable of attending to any kind of business. In this state I (Sir Everard Home) was obliged to take upon myself the charge of his patients, as well as of his other

* This does not exactly accord with the same author's subsequent history of Mr. Hunter's sufferings, where this illness appears dated a year earlier.

affairs; and these were so extensive, that my residence in his house became absolutely necessary. His recovery was very slow; and his health received so severe a shock, that he was never afterwards entirely free from complaint, or capable of his usual bodily exertions.

"After his recovery from this illness, he was subject to affections of his heart, upon every occasion which agitated his mind, or required any sudden exertion of the body. In this infirm state, he was unable to attend his patients upon sudden calls in the night, or to perform operations without assistance; and for these reasons, I (Sir Everard) continued to live with him till within a year of his death, and then took a house within a few doors; which, in no respect, detached me from his pursuits, or prevented me taking a part in his private practice."

In the year 1787, Mr. Hunter having been twelve years a Fellow of the Royal Society, and having in addition to his former contributions, presented a paper containing an account of an experiment to determine the effect of extirpating one ovarium on the number of young; a paper proving that the wolf, jackall, and dog are of the same species. For these papers he received the annual gold medal of Sir John Copley, as a just return for the many valuable papers he had presented to the Royal Society.

"These labours," says Sir Everard, "shew that the decline of his health, although it diminished his exertions, by no means abated his ardour for the inquiries in which he was always engaged.

"In July, he was chosen a Member of the American Philosophical Society. He now applied to the governors of St. George's hospital, to be allowed, on account of his health, an assistant-surgeon, which they very readily granted, and I [Sir Everard] was appointed to that office.

"His collection, which had been the great object of his life, both as a pursuit and an amusement, was now brought into a state of arrangement; and gave him, at length, the satisfaction of shewing to the public a series of anatomical facts formed into a system, by which the economy of animal life was illustrated. He shewed it to his friends and acquaintances twice a year; in October to medical gentlemen, and in May to noblemen and gentlemen, who were only in town during the Spring. This custom he continued to his death."

We have much pleasure in extracting the following particulars about his portrait, as we have been enabled to present our readers with an accurate copy of it.

"Several of his friends had long been desirous of having an engraving of him, and requested him to sit for a picture to some painter of eminence whom they would employ. This he always declined, not choosing that it should be done at the expense of others; and thinking the price too high for himself to pay. His scruples were, however, at length surmounted, by a desire to oblige Mr. Sharp, the engraver, of whose works he was an admirer. This artist made a request that he would sit to Sir Joshua Reynolds, who had promised to take an unusual pains with the picture; as the engraving was proposed more as a test of the artist's abilities upon which he might establish a character, than as a print for sale.

"This picture, which is one of the very last works of that eminent painter, and one of his best, remains in the possession of Mr. Hunter's son; and the print which Mr. Sharp engraved from it, is considered as one of the most spirited heads, and finest engravings, which have been produced in this country.

"In the year 1789, Mr, Bell, who was become a very skilful anatomist, and good practical surgeon, received an appointment as assistant-surgeon to the Island of Sumatra, in the service of the Honourable East India Company. This appointment, procured by the friendship of Sir Joseph Banks, he accepted with a double view, the one to improve his fortune, the other to collect specimens in natural history, In both of these pursuits he was successful beyond his most sanguine expectations; he sent home some very rare specimens of animals and corals, and two papers, since printed in the Philosophical Transactions, one on the double-horned rhinoceros; the other giving a description of an uncommonly formed fish; but, unfortunately for science, he died of a fever, very much regretted by his friends, in the year 1792.

"In the year 1792, Mr. Hunter found that his course of lectures took up so much of his time, that he was unable to correct his other papers. He therefore gave it up to me. As a previous step to this arrangement I had given it for the two preceding summers. Mr. Hunter now began to prepare the present work for the press, and intended as soon as it was in the hands of the public, to give a

course of practical lectures in surgery, for which he had many years been collecting materials; these were so far advanced, that another winter, had he lived, would have finished them. The materials of these lectures having come into my hands; that they may not be entirely lost to the public, I mean to avail myself of them, and am preparing my arrangements for that purpose.

"Upon the death of Mr. Adair, which happened in this year, Mr. Hunter was appointed inspector-general of hospitals, and surgeon-general of the army. He was also elected a member of the Royal College of Surgeons in Ireland.

"In the year 1791, he was so much engaged in the duties of his office, as surgeon-general to the army, and his private practice, that he had little time to bestow upon his scientifical objects; but his leisure time, small as it was, he wholly devoted to them.

"In 1792, he was elected an honorary member of the Chirurgo Physical Society of Edinburgh, and was chosen one of the vice-presidents of the Veterinary College, then first established in London. He published in the Transactions of the Society for the Improvement of Medical and Chirurgical Knowledge, of which society he was one of the original members and a zealous promoter, three papers, on the following subjects:—Upon the Treatment of inflamed Veins, on Introsusception, and on a Mode of conveying Food into the Stomach, in Cases of Paralysis of the Œsophagus.

"He finished his Observations on the Œconomy of Bees, and presented them to the Royal Society. These observations were made at Earl's Court, and had engaged his attention for many years; every inquiry into the economy of these insects had been attended by almost insurmountable difficulties; but these proved to him only an incitement, and the contrivances he made use of to bring the different operations of these indefatigable animals to view were almost without end.

"Earl's Court to Mr. Hunter was a retirement from the fatigues of his profession; but in no respect a retreat from his labours; there, on the contrary, they were carried on with less interruption, and with an unwearied perseverance. From the year 1772 till his death, he made it his custom to sleep there during the autumn months, coming to town only during the hours of business in the forenoon, and returning to dinner.

"It was there he carried on his experiments on digestion, on exfoliation, on the transplanting of teeth into the combs of cocks, and all his other investigations on the animal economy, as well in health as in disease. The common bee was not alone the subject of his observation; but the wasp, hornet, and the less known kinds of bees were also objects of his attention. It was there he made the series of preparations of the external and internal changes of the silk-worm; also a series of the incubation of the egg, with a very valuable set of drawings of the whole series. The growth of vegetables was also a favourite subject of inquiry, and one on which he was always engaged in making experiments.

"In this retreat he had collected many kinds of animals and birds, and it was to him a favorite amusement in his walks to attend to their actions and their habits, and to make them familiar with him. The fiercer animals were those to which he was most partial, and he had several of the bull kind from different parts of the world. Among these was a beautiful small bull he had received from the Queen, with which he used to wrestle in play, and entertain himself with its exertions in its own defence. In one of these contests the bull overpowered him, and got him down, and had not one of the servants accidentally come by and frightened the animal away, this frolic would probably have cost him his life."

CONCLUSION OF DR. GRANT'S LECTURES AT THE HUNTERIAN SCHOOL OF MEDICINE.

At the conclusion of his short, but brilliant course of Lectures on Comparative Anatomy, at the Hunterian School of Medicine, Dr. Grant said, this was the fourth time he had the pleasure of bearing testimony to the diligence and attention of the pupils of *private* schools.

He had lectured at Edinburgh, at Liverpool, at the Aldersgate School, and in all he had met with profound attention. His course on this occasion was a short one. They had not the means, in an infant establishment, of illustrating a long course, with an extensive museum, but the pupils he trusted had made up in diligence. Whatever plan for improving the profession the government might adopt, he trusted that no school would have privileges not granted to all; for the privileged ones would assuredly be-

come indolent, and the desire of emulation and competition which had so distinguished the medical school in London, would be destroyed. The learned Doctor concluded amid the most deafening cheers from his numerous class.

MR. LISTON'S LATE OPERATION.

To the Editor of the Medical and Surgical Journal.

Sir,—As you have admitted into your valuable journal, some statement respecting a late operation by Mr. Liston, and affixed thereto some remarks which you consider were called for, on the occasion, your sense of justice will, I am sure, give a place to the few observations I shall hastily throw together in reply to them.* You state that you "cannot agree with Mr. Liston that in the above case, or in any other case, is a surgeon warranted in performing any operation, *merely* at the solicitations of the patient." How does the fact stand? Mr. Liston would not have selected this as a case in which he should have operated, had not the patient urged him to do so, and seeing that there *were many favourable points about it,* he undertook the operation, as being the only chance for the patient. Yet you say the operation was performed contrary to the opinion of the operator himself.

You cannot suppose that Mr. Liston for a moment anticipated that his patient would have sunk from the shock of the operation, his opinion extended only to the nature of the tumour, and the probability of its return. The fatal result of the operation therefore, *was* contrary to the opinion of Mr. Liston, but had the shock of the operation been survived, it is not to be asserted that the patient would not have lived as long as though the disease had not been interfered with. Mr. Liston has remarked to us at the hospital long before this case occurred, that diseases of the jaw of this malignant character, should be attacked early, as no other chance remained for the patient. And a case is recorded in which he removed a similar growth many years since, and the patient still survives, and has had no return of the affection. You say that "if Mr. L's. opinion of the true nature of the disease was correct, the patient had no chance." Why Mr. Liston's opinion was a correct one, and the only chance of any thing like recovery was the operation. The opinion stands recorded as correct; and had the *shock* been withstood, who shall say the case would not have been successful? How many patients have sunk from the shock of operations in which every prospect of success appeared; in which the case appeared favourable in every respect; and these, too, often after the most trifling operations. Yet will you blame or condemn a surgeon on such grounds? Regarding operations of the jaw, how do recorded cases stand? Why out of fifteen operations, in which the whole or part of the superior maxilla was removed by the most eminent surgeons, *eleven patients died either from the* IMMEDIATE EFFECTS *of the operation, or from a return of the disease.* Mr. Liston has recorded five successful cases out of six or seven; his practice therefore at the least, has been much more successful than the average of all other operators. These cases were read at the Medical and Chirurgical Society, and will of course be published in the forthcoming "Transactions."

As to the statements of eye-witnesses, respecting the patient, and the number of spectators, and their becoming faint, I was an eye-witness myself, and it cannot be denied, that the man *appeared* in good health, but it will not be denied, of course, that he was suffering from a horrid and incurable disease, which must have terminated in a horrid death at no very distant period. As to the patient being a good deal exhausted, it is true he was so, but did your correspondent ever see a severe operation in which the powers of the patient were not more or less overcome? Respecting the number of spectators, there were nearer 300 than 200, it was this, with the great heat of the theatre, and not with the operation which produced faintness. Your correspondent will remember, that there were one or two minor operations, before the jaw-case came on, and that it was during their performance, the chief of the fainting occurred, from the excessive crowd and heat. These few observations I have thought due, to our esteemed teacher; as to the remarks made on the operation in the "Lancet," these we have nothing to do with. On reflection, you will at once perceive, that you have rendered this distinguished

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* The cases and comments were furnished to us by a valuable correspondent, and it is really too bad to hold Editors responsible for every article in their pages.—ED.

surgeon an injustice,* and as you call the journal in which the report of this operation appeared "his own," how much more is due to him for the immediate publication of an unsuccessful operation, a proceeding so original in these puffing days.

I am, Sir,
Your's, &c.
A STUDENT OF THE NORTH LONDON HOSPITAL.

Dec. 12th, 1836.

MEDICAL EDUCATION—KING'S COLLEGE.

To the Editor of the London Medical and Surgical Journal.

SIR—Your correspondent "Anglicus," in his letter published in your last number on "London Medical Education," professes to be intimately acquainted with the inducements which led the Council of the King's College to select Dr. Todd to the Professorship of Anatomy and Physiology, vacated by Mr. Mayo.

I beg, on Professor Todd's account, to inform you, that though the members of the Council were in a great degree influenced by the "red-hot Toryism" of the *Rev.* Dr. Todd, who has been facetiously styled by the liberal press, "THE IRISH BULL-MAKER," in selecting the *medical* Doctor for their Professor; they are grievously mistaken if they suppose that he identifies himself in the *slightest degree* with the arrogant political absurdities of his reverend brother. On the contrary, the *medical* Doctor Todd's career has been marked by his strict adherence to *liberal principles*, from the time that he was a student in Dublin, until he first *publicly associated* himself with the then Radical Aldersgate-street-School, which was founded by that head of medical *reformers*, Mr. LAWRENCE. Professor Todd's pecuniary disappointments, in not being remunerated as he expected, when he purchased into that establishment, might have disheartened individuals less ardent than himself; yet his *liberal opinions* got the better of any *selfish feelings*, and he energetically adhered to his post until the most direct overtures from "the select school in Westminster," to which *Anglicus* alludes, induced him to change his quarters, and come further west. At a considerable loss, he disposed of his Aldersgate-street purchase, and associated himself with the Westminster speculation, still making it a *sine qua non* that he should be unshackled, both in the performance of his professional duties, and in the *free delivery* of those *liberal feelings*, for which his new colleagues were not very remarkable. These demands were readily conceded, and Professor Todd became a large shareholder in the new Westminster school.

Again surprised at the non-appearance of pupils at the *October harvest*, notwithstanding the *promises* held out to him; he wisely cut the concern, and threw himself into the arms of King's College; the affairs of which were in so tottering a condition that the Council and Professors received him without requiring those *evidences of adhesion to the Established Church*, which they always *exacted* from candidates for Professorships under *former circumstances*.

Anglicus is wrong if he means to insinuate that Professor Todd is of the same complexion in politics as the other members of his family; in this respect he is like an Albino at Surinam. He was well acquainted with the *principles* of King's College when he connected himself with it, but he joined it with a hope to instil into the minds of its Governors those *liberal* feelings which his long-sightedness knows must be predominant in a short time, and by the adoption of which, the King's College would stand the only chance of eminence as a medical school; and Professor Todd, prominent as a physiological teacher, and as the individual who accomplished what a Ross, with more ability, but less energy than himself failed to do.

Even at a risk of the *liberal* and disinterested views of Professor Todd being "nipped in the bud" by the intrigues of his present associates, I cannot allow your correspondent, *Anglicus*, to insinuate against him principles which he has, in *private* and in *public*, ever repudiated.

With respect to the anecdote of Conservative and Radical matters, Professor Todd has always been in the habit of enlivening the monotony of an hour's lecture upon physiology by such occa-

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* Nothing was more foreign to our feelings than to do Mr. Liston an injustice as an operator, and our pages abound with reports of his operations, the best proof of our high opinion of him as an operative surgeon. The case which gave rise to the preceding letter was copied from the *Lancet* by a correspondent to whom we refer the foregoing defence of Mr. Liston.—ED.

sional sallies of *Irish* wit. He has told this happy hit over and over again in Aldersgate-street, and last year at the Westminster School, with the best effect; but, when he felt the political palates of the King's College students with this oft-told tale, he was assailed with a volley of hisses whenever a Radical muscle was mentioned.

This fact shews the gigantic task Professor Todd has undertaken in endeavouring to work anything like reform at King's College.

Wishing *him* every success, and your valuable journal every prosperity,

I am, Sir,
Your constant reader,
A Liberal Student of King's College.

Somerset House, Dec. 13, 1836.

EFFICACY OF HOMŒOPATHY.

To the Editor of the Medical and Surgical Journal.

Sir,—The subject of homœopathy, being so very obnoxious and unpalateable to the professional appetite, I almost fear you will refuse admission to the accompanying paper; but the motive I have explained therein, I hope will prove a passport to your impartial favor.

I remain, Sir,
Your obedient servant,
John Langley.

In reporting the following cases, I have no other object in view, than to record the effects which resulted under my own immediate close observation, from the administration of most minute; (or infinitessimal, if a more descriptive term) doses of the following medicinal agents, viz. aurum foliatum, chamamilla, aconite and oxymuriate of mercury, which were prescribed by Dr. Uwins, and administered in part by myself, and I hold it a duty, and an act of justice to that most honorable and respectable physician, to shew to the profession, as far as my feeble efforts will extend, that the action of these atomic doses, far from being as assumed prima facie, inert and inappreciable, produce symptoms and effects only equalled by their opposite extremes. The first case I have to relate, is that of a child thirteen months old, who had been suffering from difficult dentition, accompanied with all the symptoms attendant upon an aggravated form of that disorder, pain, fever, insomnolence, deranged prima viæ, and frequent convulsions; to alleviate which, the gums were freely incised, topical bleeding carried to a considerable extent, calomel largely given, the bowels kept relaxed, the febrile symptoms combatted with salines, antimonials and warm baths, and the head when pre-naturally heated, covered with cold evaporative lotions, and the restlessness and irritation produced by the disordered condition of the brain and membranes endeavoured to be relieved by appropriate sedatives; as we have too often the mortification to witness, all failed to have the desired effect, coma ensued, only broken by convulsion, and that peculiar shrill shriek, which accompanied with strabismus and dilated pupil confirms the hydrocephalic character: at this period a globule* of chamamilla was administered by Dr. Uwins himself, in a few hours afterwards I was called to the child, the parents conceiving that small pox was appearing; I found erythematous condition of the face, neck, body and limbs, assuming the elevated weal-like character of Urticaria, the eyelids closed and swollen with erysipelatous vesication, every previously described symptom, except coma, seemed critically heightened, to be brief, upon the gradual subsidence of which, from the adoption of warm bathing and other treatment this child eventually recovered, contrary to my previous prognosis. The parents of this child are residing in Goodge street, and I should be happy to introduce any professional gentleman who might wish to investigate the case. The child of a tradesman in Tottenham Court Road, contemporaneously with this, an identical parallel case, both as to symptoms, and progress of hydrocephalic affection, was subjected to the same treatment, followed by the same results, excepting that the eruption after the exhibition of the globule, assumed more the character of vivid scarlatina this child also recovered—a third case, was that of a lady, who having ruptured a vessel in the chest from coughing, free venesection, digitalis, the mineral acid, &c., arrested the further progress of the hœmorrhage, but very considerable febrile action supervened, with harrassing cough almost without intermission, blistering, sedatives with nitrate of potash and all the usual cough placebos failed to relieve,

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* I am informed each of the globlues referred to, contain only the *quintilionth* part of *one grain* of the active medicine.

and suspecting tubercle, considered it a case of incipient phthisis—Dr. Uwins was consulted, who closely investigated the case, and prescribed the 140th part of a grain of extract of aconite and oxymuriate of mercury, (prepared "secundum artem homœaphthicam,") to be given every three hours—by placing the powder, *dry*, upon the apex of the tongue, this medicine was continued, uninterruptedly through the day and night; during which period a perfectly new and different train of symptoms supervened, viz. most painful and distressing spasms pervaded the muscles of the body, limbs and ligaments of the joints, accompanied with subsultus tendinum of both extremities, none of which symptoms were in the slightest degree developed before the administration of these medicines, but the cough, the symptom which most seriously absorbed my attention, and was the only source of complaint of my patient, almost entirely vanished, and she expressed herself, as compensated for the endurance of this painful condition, by the loss of the very distressing cough, she had been previously suffering—whether this change of disorder and locality, was merely a spontaneous metastasis from membranous, to muscular and ligamentous strictures, one of those incomprehensible vagaries of the "vis medicatrix naturæ," we so often unaccountably meet with in practice; or was arising from the direct influence of these shadowy doses of powerful medicines, I do not pretend to determine, and is foreign to my purpose; and I confess a credence in such magical influence, is an extension of the mantle of faith, calculated to smother all rational conclusion and investigation—the fourth and last case, was that of an epileptic youth sixteen years of age, who had for the last three years been attacked three or four times a month with convulsive affections of the usual epileptic character, during the greater part of which period he had been under the care of Dr. Uwins and myself, and had been subjected to all the usual praxis, suggested by condition and symptoms; nitrate of silver, strychnia, and every species of antispasmodic were resorted to, premised by correction of the primæ viæ, and removal of vascular congestion when appearing to exist, notwithstanding the disease lapsed into the chronic form, and these attacks occurred, pretty regularly thrice a week, about two months since Dr. Uwins gave an aurum globule—in the course of the night, the sufferer had nine violent fits, accompanied with coma, high fever, delirium, floccitatio, and depraved vision—in this condition I visited him, and could not refrain from adopting such treatment as the symptoms indicated—I bled freely, topically and generally, blistered the nucha, cataplasmed with sinapisnu the feet, purged the bowels and frigified the head—the symptoms yielded to treatment, and this young gentleman, whom I saw a few days since, is in far better physical health, and capable of more steady intellectual exertion, than he has been since the commencement of the epilepsy, and he has not now, upon an average one fit, where he was wont to have four, and the character of it, much less severe.

That these extraordinary changes in the condition of the cases, herein recited, might by possibility have occurred, independently of the action of the atomic doses, I am not prepared to deny; but it must be admitted, by the most scrupulous sceptic, that there appears an extraordinary coincidence, so strong and rational a relation of cause and effect, as to justify a favourable conclusion; and the apparent inadequacy of a cause, cannot be received as positive evidence of incompetence of effect; the only way in which I can possibly account for the modus agendi of these "minima minimorum" doses, is, that the nearer we can by extreme divisibility approach to the primitive atom, so far do we divest it of its attraction of aggregation, separating by a foreign agent each particle, and destroying thereby its *particular affinity*, and probably rendering it more subtile, and easy of reception by the papillary nerves, with which by the peculiar mode of its administration, it becomes in contact.

36, *Tottenham Street, Fitzroy Square, December 8th*, 1836.

SOME EXPERIMENTS AND OBSERVATIONS ON TYING THE CAROTID AND VERTEBRAL ARTERIES, AND THE PNEUMOGASTRIC, PHRENIC, AND SYMPATHETIC NERVES. BY SIR ASTLEY COOPER, BART.

(From Guy's Hospital Reports.)

No. III.

THE anastomosis of arteries in all parts of the animal frame, and the circuitous channels through which the blood, when arrested in its progress along a principal

trunk, is conveyed to its destination, have been for some time well ascertained; and the advantages arising from this arrangement of vessels in the natural condition of the body, as well as the safety afforded by it under certain accidents, diseases, and operations, are perfectly understood.

The existence of these anastomosing vessels has been proved, by the examination of diseases in which blood-vessels have been obliterated, by experiments performed upon the arteries of living animals, and by the result of surgical operations upon the human subject, and the dissections after death; and the injected preparations contained in our anatomical museums exhibit, for the principal arteries of the body, the place at which the main trunk has been rendered impervious, and the mode in which the circulation has been preserved.

In the chest, the aorta has been obliterated by disease, and the intercostal arteries have supplied its place in carrying on the blood. In the abdomen, the aorta has been entirely obstructed by an aneurism situated above the bifurcation; the two iliacs below being reduced to mere cords. The common iliac has been successfully tied by Mr. Guthrie; and the internal iliac by Mr. Stevens. The external iliac, and the arteries below it, have been now so frequently tied, and the anastomosing vessels so clearly demonstrated, that no doubt is entertained of an adequate supply of blood being sent to the lower limbs after these operations.

The subclavean arteries have but few anastomoses; but they are still sufficient to nourish the upper extremity; and the arteries of the arm below may be tied without danger of an insufficient supply by subsidiary currents.

The carotid arteries have been found, by Baillie, obliterated by disease. That artery has been now frequently tied on one side of the neck; and it has even been secured, at distinct periods, on both sides of the neck of the same person: and in these cases, the current of the blood has still flowed freely into the remote branches.

Still, however, the intimate connection between the functions immediately essential to life—of the brain and other organs, and the necessity for a due supply of blood for the maintenance of cerebral action, gives to the vessels of the head extreme importance in the eyes of the surgeon and physiologist, and justifies him in pushing his inquiries respecting them to the utmost limit.

It will be seen that some animals die immediately from interrupting the circulation in the carotid and vertebral arteries; but that others survive the experiment, and give an opportunity of ascertaining the means of anastomosis.

LIGATURES PLACED UPON THE VERTEBRAL AND CAROTID ARTERIES OF A DOG.

On the 28th of January, 1831, I tied the right and left vertebral and the right and left carotid arteries of a dog, and all was completed within half an hour. The animal appeared insensible, or as if it were intoxicated; it had difficulty in breathing; its pupils were dilated; its volition was diminished; and it ran against the leg of the table, or any other body, without seeing or regarding it. When placed upon its legs, it fell down on its right side, and had spasmodic twitchings of its hinder extremities.

At the expiration of a quarter of an hour, it was still insensible: it had shiverings, although placed near the fire: it rested its head upon the ground on the right side: its respiration was still laborious; and its pupils were dilated.

After an hour and a half, however, it was able to stand, and, although with difficulty, to stagger around a small room.

On the 29th, it was dull, and indisposed to move. On the 30th, it was much the same, and not inclined to move or eat. On the 31st, it walked round the room; and ate about an ounce of food, but would not lap. On the 1st of February, it was much better: it ate and drank; and from that time gradually recovered. It afterwards became a good house-dog; and I kept it for nine months, when it was killed, that I might inject it. The number and the size of the anastomoses were very extraordinary; and they are accurately exhibited in the accompanying Plates.*

The description of them is as follows: The carotid artery on the right side was obliterated opposite the fifth and sixth cervical vertebræ: below the obliteration it is injected from the aorta; above the obliterated part it is filled with injection, (1) from the inferior thyroideal artery communicating with the superior thyroideal by large branches; (2) by a

* The preparations are now in my possession.

large descending cervical branch, dividing into numerous large anastomoses; and (3) by branches from the vertebral artery anastomising with the external carotid artery on the first vertebra of the neck.

The left carotid was obliterated from near its origin, but filled with injection above the obliterated part, by the inferior thyroideal artery communicating with the superior, and by the ascending cervical artery from the subclavian, by numerous and large anastomoses, and by an œsophageal artery from one of the intercostals communicating with the superior thyroideal artery.

The right vertebral artery was obliterated near its origin on the seventh cervical vertebra, but filled with injection above the obliterated part by two branches from the superior intercostal arteries, which passed, on the back of the spine, into the arterial canal of the vertebræ, at the fourth, fifth, and sixth intercostal spaces. The vertebral artery thus produced passed to the second vertebra of the neck, where it formed the basillary artery, and, in its course, had festoons or loops formed in it, as far as the first vertebra, at each intervertebral substance; and here, upon the transverse process of the first cervical vertebra, it formed communications with the carotid.

The left vertebral artery was obliterated close to its origin, but was filled with injection by an anastomosing branch from the superior intercostal artery, which entered between the fifth and sixth vertebræ of the neck; and by a second branch, also, from the intercostal artery passing on the posterior surface of the transverse processes of the fourth and fifth cervical vertebræ; then, over each transverse process was a loop of arterial communication, forming down each side a beautiful display of festoons.

On a second occasion, I tied the left vertebral artery of a dog. I then secured the right vertebral; and after an interval of eight days I put a ligature on each carotid artery.

The animal was weakened in its forelegs; but in other respects it suffered less than the former; and on the following days it took its food as usual.

The right carotid was obliterated; the injection passed from the aorta to the obstructed part, and above it, by an anastomosing vessel from the vertebral, and by an ascending cervical artery from the right subclavian.

The left carotid was obliterated, but filled with injection to the place of obliteration, from the aorta; and above, it was filled by an ascending cervical, an inferior laryngeal branch, and others from the vertebral.

The right vertebral artery was obliterated opposite the seventh cervical vertebra, before it entered the foramen of the sixth vertebra; but above the obliteration it was filled by an anastomosis with the superior intercostal artery: it then ascended through the canal in the sixth cervical vertebra, forming beautiful festoons and junctions with arteries passing over the vertebra, opposite each intervertebral substance, and joining, by anastomosis, with the carotid at the first vertebra of the neck.

The left vertebral artery was obliterated at the seventh vertebra; but the artery formed anastomosis, one with the subclavian, and two with the superior intercostal.

The artery on this side formed similar but larger junctions than the right, opposite to each intervertebral substance, in festoons or loops; and thus the vertebral artery was reproduced, and filled with injection from these vessels.

The two vertebral united to form the basillary artery as usual, and joined with the internal carotids at the circle of Willis.

Where the basillary artery was first formed, anastomosis were sent to the carotid arteries on the transverse process of the first cervical vertebra.

The result of tying the carotid and vertebral arteries in the dog is such as I have described; but in the rabbit it is different, as in this animal the arrest of the blood in these four vessels is immediately fatal.

Besides the determination of this point, it was my object, in the following experiments, to ascertain the different effects which would be produced by tying separately the vertebrals and the carotids.

The size of the carotid arteries, compared with the vertebrals, is much less in some animals than in man, in proportion to the inferior development of the cerebrum; and the tractus respiratorius being supplied by the vertebrals, the current of blood in these arteries might be supposed to exercise an influence on the respiration.

LIGATURE PLACED ON BOTH CAROTID ARTERIES.

In the first place, I applied a ligature

to the carotid artery on each side of the neck.

Little effect was produced; except, that the respiration was quickened for a few minutes, and the animal rendered dull and disinclined to eat during the day: but on the following morning it appeared lively, and ran about with its natural activity. So that it may be truly said, that these two arteries may be tied with very little change in the functions of the animal, excepting that the respiration is quickened; and this perhaps may be attributed to a greater quantity of blood being impelled through the vertebral arteries, in consequence of its interruption in the carotids.

LIGATURE PLACED ON BOTH VERTEBRAL ARTERIES.

I next placed a ligature around both vertebral arteries. When I had tied the first, there was some difficulty in breathing; but when I had tightened the second ligature, this difficulty was greatly increased. The respiration was at first slow, but it afterwards became quicker. The animal retained volition and sensation, but its fore legs were weakened.

At the end of two hours, its breathing was laborious; its ears dropped to the right side; its heart beat quickley; it was dull, and indisposed to move; and its fore legs were still weak.

After four hours and a half, it ran about, but with its ears fallen: its respiration was slower.

On the following day, there was a murmuring in its breathing, which was increased under excitement: its heart beat quickly and forcibly: its pupils were not dilated.

On the second day, the respiration was slow and heaving; it had an irregular action of the heart; it was dull; and its heat was 102. In the evening, its respiration was irregular and heaving; but it moved about, and took food.

On the third day it was dull: its breathing was slow: its heart beat quickly: it ate food.

On the fourth day, it appeared heavy, and indisposed to move. The action of its heart was quick and strong: its respiration was slow, but no longer stertorous.

On the fifth day, its breathing was slow: it appeared dull and heavy: the action of the heart was still quick.

On the sixth day, the respiration was laborious and slow, being only 64, instead of between 120 and 150, the natural number of inspirations in a minute: its heart beat rapidly, and not forcibly: it was very dull, and indisposed to move: it was getting thin, but it took its food as usual.

On the seventh day the animal was found dead; and on the eighth I examined it, after injection, and found an abscess in the neck. The vertebrals had been well secured, and the brain had received injection by the carotid: the basillary and cerebellal arteries were filled from the circulus arteriosus. This animal's death may have been hastened by the abscess.

I have many times repeated this experiment; and it uniformly produces a marked effect upon the respiration, which it renders slow and laborious. The fore legs are weakened; and a much more severe effect is produced upon the animal than when the carotid arteries are obstructed; insomuch, that it will rarely recover from the operation.

THE CAROTIDS FIRST TIED, AND THEN THE VERTEBRALS.

The next step was, to ascertain the effect of arresting the blood in the vertebrals, after the carotids had been secured.

I tied the carotid arteries: the respiration and circulation became quicker: volition and sensation remained in all their activity.

In twenty-four hours, the animal appeared very lively, but its breathing was quicker than natural. After forty-eight hours, it breathed less quickly; it ran about in a lively manner; and it ate heartily.

On the third day, it was difficult to catch: on the fourth, fifth, sixth, seventh, and eighth days, it appeared to be in a natural and healthy state: and on the ninth I exposed the vertebral arteries, and found them obviously enlarged. A ligature was tied upon each of these vessels. The respiration stopped immediately, and the animal appeared dead; but it afterwards made seven gasps, from convulsions of the diaphram: its hinder extremities became also convulsed; but in a minute, all voluntary motion ceased.

On opening the abdomen and chest, it was seen that the peristaltic motion of the intestines remained; and the heart continued to act for a few minutes after apparent death.

This experiment shews how little the functions of the brain depend upon the

carotids, and how much upon the vertebral arteries.

CAROTIDS TIED—VERTEBRALS COMPRESSED.

As tying the vertebral arteries is a difficult experiment, it occurred to me that I might compress them with my fingers, after tying the carotids, and produce the same effects.

I tied the carotid arteries. Respiration was somewhat quickened, and the heart's action increased; but no other effect was produced. In five minutes, the vertebral arteries were compressed by the thumbs, the trachea being completely excluded. Respiration almost directly stopped; convulsive struggles succeeded; the animal lost its consciousness, and appeared dead. The pressure was removed; and it recovered, with a convulsive inspiration. It laid upon its side, making violent convulsive efforts; breathed laboriously; and its heart beat rapidly.

In two hours it had recovered; but its respiration was laborious.

The vertebrals were compressed a second time. Respiration stopped: then succeeded convulsive struggles, loss of motion, and apparent death.

When let loose, its natural functions returned, with a loud inspiration, and with breathing excessively laboured.

In four hours, it was moving about, and ate some greens.

In five hours, the vertebral arteries were compressed a third time, and with the same effect.

In seven hours, it was cleaning its face with its paws.

In nine hours, the vertebral arteries were compressed for the fourth time; and with the same effect upon its respiration.

After thirteen hours, it was lively.

In twenty-four hours, the vertebral arteries were compressed for a fifth time, and the result was the same, viz. suspended respiration, convulsions, loss of motion, and consciousness. On the removal of pressure, violent and laborious respirations ensued; and, afterwards, the breathing became very quick.

After forty-eight hours, for the sixth time, the compression was applied, with the same effect.

Thus it appears, that if the carotid arteries are tied, simple compression of the vertebrals succeeds in putting an entire stop to the functions of the brain.

VERTEBRALS TIED—CAROTIDS COMPRESSED.

I then reversed the preceding experiment, by impeding the current of blood first in the vertebral arteries.

I placed a ligature tightly around the vertebral arteries.

The respiration became immediately laborious: its right ear fell, and the right fore-leg was partially paralyzed.

In one hour, it was indisposed to move; its respiration was slow and laborious; and its right fore-leg in a great degree recovered. Its sensation remained; but its volition was less than before the experiment: it smelt at the food offered, but would not eat it.

In three hours, green food was placed in its mouth, which it ate.

In five hours, it was running about; but its right ear remained in the same situation.

On the following day, its respiration was slow, and it appeared dull.

I pressed, with my thumbs, the carotid arteries on each side of the larynx, which was left free.

It fell upon its side; it lost all sensation and volition; and its eyes were drawn back.

Upon removing the pressure, it soon recovered.

On the second day, its respiration was quick; its ear much risen; its fore-leg less paralytic: it sat up; and moved from place to place.

A second time I compressed its carotids. Its eyes were drawn back; it was convulsed; and its respiration was quick and laborious; and it was affected in the same way as on the preceding day, but in a less degree.

On the third day, its respiration was hurried, and 150.

For the third time I compressed its carotids. It fell upon its side, and was insensible; but soon recovered, and ran about.

On the fourth day it was dull, and its respiration was laborious: it ate some green food.

In the afternoon of this day, it became very dull, and refused the food placed before it; and on the morning of the fifth it was found dead.

I injected this animal with coarse injection: and, upon dissection, it was found that abscesses had formed around the ligatures. The vertebral arteries were fairly tied, and the carotids greatly enlarged, but they were compressed by the abscesses.

The injection had entered the cranium by the internal carotids, but not by the vertebrals; nor was there any injection in the basillary artery by the circle of Willis.

CAROTID AND VERTEBRAL TIED ON THE SAME SIDE.

On another occasion, I tied the carotid and vertebral arteries on the same side; the breathing became laborious, and the fore-leg was partially paralyzed. I subseqnently compressed the vessels on the other side, with the usual effect of producing apparent death: but the pressure being removed, the animal recovered; and at the expiratlon of eighteen days it was quite well, excepting that it had a difficulty in breathing, under excitement. It was then killed and dissected. The arteries had been securely tied.

It appears, then, that the obliteration of one carotid and one vertebral, on the same side, does not produce a fatal effect.

VERTEBRAL AND CAROTID ARTERIES TIED AT THE SAME TIME.

In order to cut off at once the several currents of blood to the brain, I tied at once both the vertebral and carotid arteries.

The animal breathed no more; but there were thirteen or fourteen convulsive contractions of the diaphragm, and convulsions of the hinder extremeties, and the animal ceased to exist.

This is a most decisive experiment; shewing the effect of the arrest of the blood in the vessels of the brain, in stopping respiration, volition, and sensation; and the result is striking and immediate.

The same effect of interrupting the streams in the vertebrals and carotids was produced in an equally conspicuous manner, without the application of ligatures, as follows. The animal was held in a convenient position, with its neck extended, and its head thrown back. I then applied my thumbs, so as to compress, at the same time, the two vessels on each side, taking care to leave the treachea entirely free from compression. Respiration ceased in a few seconds: some struggling then took place, and the animal appeared dead. The pressure being then removed, the respiration was completely suspended; but artificial motion being given to the ribs, the animal gasped, began to breathe quickly, and recovered.

I also put a ligature around the neck, close to the sternum, so as to compress the carotid and vertebral arteries; but the trachea was excluded, by passing the ligature behind it. Although the trachea remained free, as soon as the ligature compressed the carotid and vertebral arteries, breathing ceased, and all the functions of the brain were destroyed.

Before I would venture to draw conclusions from the experiments above detaled, I was desirous of convincing myself that no injury done to the nerves could have influenced, in any material degree, effects which had been observed. I proceeded, therefore, to investigate the consequences of applying ligatures to the principal nerves of the neck.

LIGATURES PLACED ON THE PNEUMO-GASTRIC NERVES.

In the first place, I put a ligature on each pneumo-gastric nerve. The animal's breathing became heaving and laborious, and fell from 150 to 48 inspirations in the minute: it was likewise accompanied by a stertorious noise: the heart beat feebly, but rapidly; food was refused. These symptoms continued; and on the following morning it was found dead. The same experiment was several times repeated, and the results were nearly uniform, the animals dying at the end of from nineteen to twenty hours.

In these experiments, it was likewise observed that the blood circulating in the arteries gradually assumed the venous colour, and that the animal heat at the same time decreased in a remarkable degree.*

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* These facts were carefully noticed in the following experiments:

EXPERIMENT 1, ON THE RABBIT.

Respiration, 132 in a minute: Heat 104.

The pneumo-gastric nerve was tied on each side: the breathing became stertorous? the animal dull, and disinclined to move.

In 1 hour, respiration 48.
3 hours..... 44.
4 ..... 56. Animal Heat 99¼ in the anus.
8 ..... 48. ..... 93¼.

I opened the carotid artery, and blood of a venous colour escaped. I tied the artery.

In 11 hours, respiration .. .. 36. Animal heat 93.

The examinations after death exhibited the lungs gorged with blood, and looking like the liver; a fluid in the pleuritic cavity; the stomach full of undigested food; and the œsophagus likewise distended with it, in those cases in which the animals had taken food after the ligatures had been applied.

LIGATURES PLACED ON THE PHRENIC NERVES.

In another rabbit, I divided the phrenic nerves one after the other, in immediate succession.

The diaphragm being then paralyzed, the animal's respiration, which was performed by the intercostal muscles, instantly became excessively laborious. The ribs were heaved violently; and a much greater effect was produced on the respiration than when the vertebral arteries, the pneumo-gastric nerve, or grand-sympathetic, were tied.

In a quarter of an hour it lay upon its side, making great efforts with its intercostal muscles; and sometimes it stopped, as if fatigued, and then again commenced. In twenty minutes it was dead. On examination, the phrenic nerves were found to be completely divided.

The heart's action, and the peristaltic motion of the bowels, were observed for a short period after apparent death.

In this experiment, respiration was rendered difficult, by obstruction to the mechanical apparatus destined to provide the necessary supply of fresh air: whereas, in the former, the difficulty arose from the failure of those processes which in health are carried on within the lungs; and may we not thence infer, that the changes of the blood are not chemical alterations merely, but dependent also upon the vital agency of the nerves and blood-vessels?

LIGATURES PLACED ON THE GRAND-SYMPATHETIC NERVES.

I now tied the grand-sympathetic nerve on each side. The respiration became quick and irregular; but sensation and volition were unaffected. The heart's action was very quick: there was a general trembling; but when the animal was put down upon the ground, it ate some greens. Its respiration continued irregular, and its heart's action very quick; and after eight days it was killed. The nerves were found well tied: one had ulcerated below the ligature; the other was nearly ulcerated through; and the ligature was surrounded by suppuration.

In another rabbit, I tied these nerves; and the animal, although it is near a month ago, is still lively and active.

12½ .... laborious, and 30. .....90¾ to ½.
12 .... respiration the same. ..... 89.
The rabbit died at this time, and the heat of the abdomen was 88½.

Examination.

ungs loaded with dark blood: water in each cavity of the pleura: food in the œsophagus: stomach loaded with food.

EXPERIMENT 2.

he Pneumo-gastric nerves tied.—Respiration 135 before the experiment. Animal eat 102.

In 1 hour, respiration 48. Animal Heat 99.
3 hours ..... 39. ..... 99.—(Stertor, or moaning, under excitement.)
4 .... 33. ..... 98½.—(The animal dull, and disinclined to move.)
6 .... 36. ..... 96: cold to the touch.
12 .... 36. ..... 97½.
14 .... 32. ..... 95½.
16 .... 28. ..... 93.
16¾ hours the animal died. Its heat 87 in the abdomen, at the time of death.

The animal felt cold long before it died.

The gradual decrease of the animal heat, the dark blood circulating in the arteries, d the gorged state of the lungs after the application of a ligature to the par vagum, e interesting and important circumstances: and we are led to question, whether the ngs, by this operation, are deprived of a nervous or vital influence essential to the ange of the blood; or whether this change is not produced in consequence of the wness of the animal's breathing: for when the phrenic nerves have been tied, the od also becomes dark in the arteries. In that case, however, the lungs are not found regd with blood.

LIGATURES PLACED ON THE PNEUMO-GASTRIC, PHRENIC, AND GRAND-SYMPATHETIC NERVES.

Lastly, I tied, in one rabbit, the pneumo-gastric nerve, the grand-sympathetic, and the phrenic. The respiration became laborious; the animal dull, and indisposed to move; and the heart's action feeble. The breathing continued excessively laborious for a quarter of an hour, when the animal died. Bloody fluid was found in the chest: the lungs were not much changed. In another similar experiment, the animal died in three-quarters of an hour.

We see, then, that an animal with all these nerves compressed may live from a quarter to three-quarters of an hour; that the ligatures on the pneumo-gastric kill in about twelve hours; and in the grand-sympathetic, that the animal will continue to live for a much longer period: so that pressure on these nerves, in the experiments in which the arteries were compressed by my thumbs, could not have been the cause of death.

(To be continued.)

INTRODUCTION OF THE CHLORIDE OF ZINC INTO ENGLAND BY DR. BUREAUD RIOFREY.

To the Editor of the London Medical and Surgical Journal.

Sir,—I read in your valuable Journal that Mr. Ure at length acknowledges that I have something to do with the chloride of zinc, and that I treated a case of lupus with Dr. Canquoin's paste, which case I published with others. I am surprised he should have so long delayed rendering justice to whom it is due, and that he should still allow the public to believe he introduced the use of the chloride of zinc into this country.

In another part of your Journal, a Mr. Frederick Williams of Pentonville, promises a full explanation from Mr. Ure on the subject: I must say these explanations are rather tardy, as nearly twelve months have elapsed since the publication of my memoir *On new Treatment of Malignant Diseases and Cancer without Incision.* However this may be, I shall feel happy to receive them, if, according to the promise made by Mr. Frederick Williams of Pentonville, they are of the *fullest* and most *satisfactory* nature. Should this not be the case, the antidote he promises will be worse than the poison? whatever may be the result it is of their seeking, "Vaut mieux un ennemi qu'un imprudent ami."

BUREAUD RIOFREY, M.D.

22, *Newman-street, Oxford-street.*
12 *December.*

INTRODUCTION OF THE CHLORIDE OF ZINC.

To the Editor of the London Medical and Surgical Journal.

Sir,—Desirous to justify the opinion politely expressed in Mr. Williams's letter, inserted in the last number of your Journal, allow me to state that I never witnessed the treatment of cancerous or other cases by Dr. Bureaud, but on one occasion, during his absence in Paris, visited a child affected with *chickenpox* gratuitously for him. Whatever knowledge I may possess, of the physiological or therapeutical action of the chloride of zinc, was obtained, through my own independent researches, and from the published memoirs, sent me from Paris, of Dr. Canquoin, to whom the sole merit of introducing that caustic is due. The last and complete French memoir was kindly transmitted to me by the author Dr. Canquoin himself. I am, Sir, your obedient servant, ALEX. URE.

London, Dec. 14, 1836.

BOOKS RECEIVED FOR REVIEW.

Elements of Phrenology. By George Coombe. Fourth edition, improved and enlarged, with Prints and Cuts. Edinburgh, 1836. Maclachlan and Stewart and G. Anderson.—A graphic manual of the subject of which it treats.

A New and Familiar Treatise on the Structure and Diseases of the Ear, and Deafness. By A. W. Webster. Published by the Author, 102, New Bond street.

Books and Communications for Review to be addressed (post paid) to D. Ryan, 8, Argyll-place, Regent-street; or to E. Cox, Medical Bookseller, St. Thomas-street, Borough.

THE

London Medical and Surgical Journal.

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NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Irritability [*continued.*]

No. II.

II. *Monsters are never found without a ganglionic system; though they are sometimes without a brain and spinal marrow.* It has been said, indeed, that unformed masses have been brought forth, at the full period of utero-gestation, without any nervous system at all. Dr. Clarke gives a case of this kind; but it is plain he looked only for a brain and spinal cord, and might easily have overlooked any ganglionic filaments; for it was long before the latter were discovered; and their distribution on the heart has often been denied; although in reality they are very large there. The nervous matter may, perhaps, have been diffused in globules through the mass; as is probably the case with the polypus, and other animals low in the scale. Lobstein gives several cases of monsters without a brain and spinal nerves; but they all had a ganglionic system, and in some it was more developed than usual.

III. *In embryos the ganglionic system is developed before the cerebro-spinal.* Irritability is the first characteristic which distinguishes the embryo from dead matter. It has long been known that the heart is in action before the spinal nerves are seen; and it is a curious coincidence that the first part of the nervous system to be distinguished is the cardiac ganglion, as was shewn by Ackerman. Lobstein says, that the sympathetic nerve is often very distinct, while the brain and spinal nerves are still obscure; and that the last ganglion developed is the cœliac; the functions of the abdominal viscera being the last brought into play.

IV. *The ganglionic system is larger in infants and in females, and they possess a greater share of irritability.* This system has been found in all animals; and in old age the ganglions become very pale. In the young and in females, they are larger than in the old and in males; and the former are of a more irritable habit than the latter.

V. *The ganglionic system is universally distributed.* It is found in all parts of the system; and all parts are possessed of irritability. The ganglionic system was not discovered till the time of Galen; and Willis was the first to shew its connection with the cerebro-spinal system, of which he said it was a part, but only as an appendage, like a parasitic plant. This view is embraced by Vieussens, Blumenbach, Chaussier, Le Gallois, Wilson Phillip, and others. Thus it is generally described as deriving its origin from the spinal cord; but this view is arbitrary; and, indeed, it is rather discountenanced by the fact of the ganglionic system being the first developed. Its independence as a system is maintained by Winslow Johnstone, Haller, Soemmering, Brossais, Lobstein, and others. In fact the two systems may be considered to be as nearly amalgamated as they are in the invertebralia; and hence they may be considered as unitedly distributed to all parts of the body. We can shew that all the nerves of the head and neck (except those of the proper senses) are connected with some ganglion; and with respect to those of the spine, there can be no question. We have as much right to say, that the ganglions *send* branches to certain nerves, as that they *derive* them from the latter. We have as much right to say, that the first cervical ganglion sends up a branch to unite with the vidian, and with branches of the sixth pair, as the reverse. Of all the nerves of the head and neck, the olfactory, optic, and auditory alone, are not connected with the ganglionic

system. Thus, that the ganglia send branches to the spinal system of nerves, is as probable as the converse; and at any rate the connection is very palpable.

VI. *The structure of the ganglionic system is very analagous to that of the sensific spinal nerves.* The ganglia are like the sensific ganglia at the posterior roots of the spinal nerves. We know that the latter impart *sensibility;* and that the former do not; and therefore we presume that they impart *irritability,* which is an analogous property. Various investigations have been made into the structure of these two kinds of nerves; and no difference has been found between them. Internally they resemble a network; but at the surface the filaments unite at an acute angle. Munro found that every nerve *issuing* from a ganglion, contains one or more filaments from every nerve *entering* it. The cortical matter of the ganglia of both systems agrees; but is different from that of the brain; inasmuch as it is said to be dissolved by alkalies; while that of the brain is said to be hardened.

VII. *The nerves of this system have a particular structure in different parts.* The form, colour, and other properties of the ganglionic nerves are the same in parts which agree in irritability; but differ where the irritability is different. Thus all the ganglionic nerves are similar, which go to the voluntary muscles, and the irritability of all these muscles is the same; for they are all affected alike by the same stimuli.

VIII. *There is no other use to be ascribed to this system.* If the ganglionic nerves do not impart irritability, we cannot tell their office. Willis said, the ganglia were receptacles for the animal spirits coming from the brain. Lancisci thought the dura mater was a muscle, which propelled the animal spirits through the body; and that the ganglia were little secondary brains, to propel them onwards. Munro and others thought their office was to subdivide the nerves which come from the spinal cord; for if the nerve went directly to the part it supplies, and that portion of the spinal cord were palsied, the part supplied by the nerve would be wholly palsied. From the intermixture which the nerves undergo in the ganglia, if a part of the spinal cord becomes palsied, a *portion* of the intestine will not lose *all* its power; but *all* the intestine will lose *part* of its power. But an objection to this view is, that the ganglionic nerves have a different effect from the spinal. Johnstone thought that irritability was distributed over the body, and received a stimulus from the ganglia, and from his remarking that these ganglionic nerves preside over the involuntary muscles, it is plain he had a glimmering of the truth. Reil gave a definite shape to the opinion, that irritability depends on the ganglionic system. He says it receives perceptions, and re-acts; but does not communicate it to the brain; or (in other words) it does not convey sensation. Broussais says, these nerves possess irritability, or a peculiar kind of *sensibility;* and impart it to the organs of digestion and secretion; and (by their union with the nerves of the cerebro spinal system) to all parts of the body. Lobstein is generally mentioned among the authors who support this view; but he has no conception of the plurality of offices of the nervous system, but ascribes the same properties to them all. His work has done little to advance our knowledge on this subject. Bichat and Wurtzer may be mentioned among the chief supporters of this doctrine.

On the other side it has been objected, that most of the ganglia may be extirpated (as was done by Dupuytren); and that, nevertheless, the parts supplied by them do not lose their irritability. But the ganglionic nerves are the same in structure as the ganglia themselves; and every point of every nerve is a centre of nervous energy. In this respect they are not like the spinal nerves, which consist of white matter alone; while the ganglionic are a mixture of white and grey. It is said that the ganglia may be violently irritated, without irritating the parts supplied by them; but others have found that the action of the heart may be re-excited after it has ceased, by irritating the cardiac ganglion.

The irritability of all parts is not the same; for it differs almost in every organ. The doctrine of specific irritabilities is not new; but has been known by different names; such as "genii," "demons," *δυναμεις archœi insiti* (with one sovereign *archæus* in the stomach) *sensus proprius* (Harvey), *spiritus regeus* (Glisson), *vita propria* (Bichat). Rolando, on "Excitability," is the best work on this part of the subject. As the irritability of plants differs from that of animals (the former not being affected by galvanism, so may irritability differ in different parts of an animal. Rolando calls this *l'aptitude à vivre.*

STIMULI TO IRRITABILITY.

A capability of being excited, and a power to excite, are necessary to a function, which is the result of both. Stimuli are necessary to act on irritability. They used to be divided into *naturals* and *non-naturals;* the former being supposed to depend on something within the body. But Brown shewed that all the functions depended on stimuli acting on irritability, and that thus life was kept up.

Direct Stimuli.

1. *Caloric.* It was an old notion that *fire* and *life* are identical. Hence the story of Prometheus. Heat may be quite *essential* to life; essential as a stimulus to irritability.

2. *Light.* This is probably a more general stimulus than has been usually supposed.

3. *Electricity and Galvanism.* These have been thought identical with life,—first by Hunter, and afterwards by Abernethy. But if that were the case, every thing charged with electricity (as was urged by Laennec) should be alive, or have the *aptitude à vivre;* and it would be as correct to say of a Leyden jar, as of an animal, that it was alive. Charles Bell thinks life is a substance; but different from electricity. The term "*nervous energy*" is vaguely used. Irritability is conveyed by the ganglionic nerves, and a stimulus by the molific nerves, and both are called "*nervous energy.*" Rolando thinks the cerebellum is like a galvanic pile; being composed of alternate layers of white and grey matter. Galvanism is a powerful stimulus; but is not identical with life, any more than other stimuli.

4. *Air.* "Breath" and "life" are identical words in many languages.

5. *Aliment.* This is essential to life, like the other stimuli, but is not identical with it, any more than they.

6. *Proper Fluids of the Body.* Of the blood all the tissues are formed, and its continued stimulus is necesssary to the performance of all the functions of the body; for if any part has its supply of blood lessened, its function is lessened. It was an ancient opinion that the blood contained the life, or was the life itself; and Hunter revived the doctrine in all its parts. His arguments were, that the globules of the blood are like those of the solid tissues; that it is capable of organization; and that it is liable to death. But milk has globules also; and yet it is never thought to be alive. Effused blood is a secretion from the capillary arteries, which form tissues in every case; and the vessels in the blood are canals formed during coagulation. Another argument urged is, that recent blood bears a greater degree of cold without freezing, than blood which has been some time drawn. But blood undergoes many internal changes after it is drawn. Hunter first presumed that blood coagulated because it died; and then he argued that it was living because it was fluid. He says, again, that if the animal be killed by electricity, the blood does not coagulate, though he had before said, it coagulates in consequence of death. This is an inconsistency in his reasoning. Some argue that the blood has spontaneous motion; but they might as well affirm, on the same ground, that a crystal is alive. Fontana declares that the blood is sensible, for on putting poison into it, the animal shrieked; but the blood immediately brings the poison into contact with the tissues.

Indirect Stimuli.

1. *Sympathy.* This is a powerful stimulus to irritability, though we cannot explain it. It is *indirect;* for if the stimulus be applied to one organ, another organ is excited, or sympathizes with the former. Thus, the stimulus of snuff causes sneezing and lachrymation. A stimulus applied to the female organs of generation produces a flow of milk; and the Tartars increase the milk of mares by tickling the vagina. An unpleasant sound may cause the teeth to be set on edge, or even a bleeding of the gums. In the latter case, something must be applied to the capillary arteries of the gums:—this is sympathy. Tickling, in some persons, will produce coughing; and a bright light, sneezing. The stimulus of urine and feces to the urethra and rectum, is the cause of setting all the abdominal muscles in action.

2. *Passions.* In the story of Prometheus, passions were given after life was imparted; and the ancients thought they were something material. Thus in the bible, the viscera of the chest and abdomen are synonymous with the passions. We still use the terms "*heart,*" "*breast,*" &c. The word "*stomach,*" too, is still used as synonimous with *inclination*; and we speak of *splenetic, hypochondriac,* &c. The *kidneys,* or "*reins,*" were used for *desires.* All know that fear blanches the face; and the passions are therefore actually causes of functional

changes, and must exist. Violent emotion will stop the flow of the menses, of the saliva, and the tears. The latter do not flow in intense grief, owing to constriction of the vessels; and when they flow, they are said to give relief; but their flow is an *indication* of relief, rather than a *cause* of it. We have known the breath vitiated in three minutes after the reception of bad news. Fear, likewise, causes the instant formation of very offensive gases in the intestines; and mirth and perfect despair make people grow fat. Bashfulness is known to make the secretion of the sebaceous glands in the axilla very offensive; and no doubt jealousy causes a more copious supply of bile; milk is almost instantly vitiated by great emotion; and desire causes a greater secretion from the vaginal follicles. The cases in which the colouring matter has been suddenly removed from the hair, are proofs of the influence of the passions. We also see this influence on different muscles in laughing, sobbing, &c. No doubt, as in the case of sympathy, the passions have their proper seats where their action is effected; but it is certain that seat is not in the viscera of the trunk; for as agitations of the thoughts must take place where the thoughts themselves exist, their seat is assumed to be the brain. Passions are a kind of sympathy; but the former are always seated in the brain; while the latter extends through various parts. Their influence is perhaps conveyed by the same nerves.

Charles Bell's "respiratory nerves," are the fourth pair, the *portio dura* of the seventh, the glosso-pharyngeal, the *par vagum*, the spinal accessory, the phrenic, and the external respiratory. The medulla oblongata, and spinal marrow, are not a simple column, but consist of *six* columns; from the two anterior of which go off the motific nerves; from the two middle, the respiratory; and from the two posterior, the sensific. The respiratory nerves are wanting, or are very imperfect, in animals which have little respiration. The admission of these nerves as respiratory, is the admission of them as conveying sympathy, between a stimulus in the lungs and the intercostal muscles. It marks only one of their uses; which are to be shewn from the same arguments as were used in the case of the ganglionic nerves.

In some animals, no sympathy or passions are observed, and in them the respiratory nerves are not found. As we rise in the scale, the *par vagum* first appears. It is not essential to the stomach; as many animals have the latter without the former; but it is found wherever there are respiratory organs. In fishes the *nervus vagus* is distributed to the thoracic ribs; thus supplying the place of the intercostal nerves and the phrenic. In the torpedo, and other electrical animals, the galvanic apparatus is supplied by the *nervus vagus;* and we know how that apparatus is influenced by the will; so that we conclude that that influence is conveyed by this nerve. In birds, the place of the *portio dura* is supplied by the spinal accessory nerve; and we know how much emotion depends on the *portio dura*. It is by the influence of this nerve that the game-cock ruffles his feathers; and in the tame-duck it is very small. The size of the *portio dura* varies in different animals, in the exact ratio of their power to express emotion by the face.

Sympathy may be defined to be a secondary irritation of one part, from a a primary irritation in another part. We know, that the ganglionic nerves convey irritability; that the anterior spinal nerves convey motion, and the posterior, sensation; and hence we conclude, that sympathy and the passions must have, as their organs, the respiratory nerves. In respiration, the primary stimulus is in the lungs; but the respiratory muscles are the efficient agents; and if they are excited secondarily through the nerves, from the primary irritation in the lungs, these nerves are proved to be nerves of sympathy. The first developed nerve of this kind, is the *par vagum;* then the *portio dura;* then in the mammalia, the spinal accessory and the phrenic; these being the principal nerves of this respiratory, or sympathic system. The cat puts up its back by means of the spinal accessory,

Are these nerves so distributed as to reach all parts of the body capable of being affected by sympathy and the passions? At first they may appear too circumscribed; but if we can prove that they are connected with the ganglionic system, we may presume that their filaments accompany the ganglionic nerves to all parts of the body. Now all the respiratory nerves are found to be closely connected with ganglions; and in this connection we may fairly presume there is a mutual interchange of filaments. Expression of countenance gradually declines, as we descend in the following

series;—man, ape, lion, dog, camel, horse, ass, cow, dear, sheep; and in the same proportion are the respiratory nerves distributed.

The next argument in favour of the respiratory nerves being the channels of sympathy and the passions, is their structure; for they are hard and fibrous, like the *motific* nerves; and not plexiform, like the ganglia and *sensific* nerves. The fifth pair is hard and fibrous, and gives sympathy to the face; but the *portio dura* of the seventh imparts *motion*, and is hard too; while the *portio mollis*, which conveys *sensation*, is soft and plexiform. "*Nervous energy*" is a vague term. It comprises four different kinds of influence;—irritability, sensibility, sympathy, or the passions, and volition.

Another argument is, that no other use can be ascribed to them; for the motions of the eye-ball could have been effected without the fourth pair; that of the shoulder without the spinal-accessory nerve; and the same of the rest. This is, in fact, the way it is managed in the lower animals. But the best arguments are those which are deduced from observations and experiments. Distortion of the face by rage, is prevented by cutting the *portio dura;* and when it was divided on one side, the ape grinned only on the other side. Bystanders were struck with the resemblance of the countenance to that of the celebrated comedian, Matthews; who probably owes to a natural infirmity, his power to excite laughter. He appears to laugh at one side of the face, and not the other. By cutting the fourth pair, Bell destroyed the expression of the eye, but not the eye-lid; for that is supplied by the *portio dura*. The latter is often paralyzed by an abscess before the ear; giving rise to an unfounded fear of general paralysis from disease of the brain. The influence of this nerve is found to extend to the capillary arteries of the eye, causing a flash of light in the latter; for this power is destroyed by cutting the *portio dura*. Hence we can explain the influence of these nerves on the capillaries of other parts; producing a blush, for instance, and the various expressions of the passions; and influencing the various secretions.

NORTH LONDON HOSPITAL.—CLINICAL LECTURE ON CASES IN THE NORTH LONDON HOSPITAL. DELIVERED SESSION 1836. BY PROFESSOR COOPER.

As there is at present in the hospital an interesting case of DIPLOPIA, or *double vision*, I will begin with calling your attention to it.

Henrietta Stevens, aged 45, was admitted October 13. Eight days before this date, as she was going up stairs with a pail of water upon her head, her foot slipped, and she fell upon the back of her head. She was taken up insensible, and remained so for 20 minutes. There was some swelling over the occiput, and for three or four days, a good deal of pain in the head. On her admission, she had no headache, but the light made her feel giddy; and she saw every thing double with her left eye, but vision was natural in the right. Menstruation ceased ten months ago.

19. To be cupped upon the occiput to ℥viij. and take Hydrarg. Submur. gr. v. nocte maneque, with house medicine occasionally. Low diet.

21. No particular change. Empl. Canthar. nuchæ.

24. Now sees single with each eye, if employed separately. This change she first observed yesterday afternoon. But when both eyes are used she sees double, unless the object be brought within four inches of the eyes. Then the object appears single, although both eyes are used.

31. Since last report, vision has been single with both eyes, when objects are placed near them, but when at a distance double vision returns. Her power of seeing single with both eyes employed, extends however, some inches further than it did a few days ago.

As her mouth is sore, she takes only five grains of calomel every other night.

Double-vision has two forms. In one, the patient sees double only when he is looking at it with both his eyes; and no sooner is one eye shut than vision is natural again. In the other, vision is double, whether one, or both eyes be employed.

The disorder is sometimes continual, sometimes periodical.

In some cases, objects seem double only when at a particular distance from the eye, or when looked at in a certain direction.

Several of these points are in the case before us.

With respect to the causes of this disease, some appear to consist in circumstances disordering the functions of the retina. Hence, diplopia is often an early symptom of amaurosis, and dependent upon causes exciting the latter affection.

In other examples, diplopia arises from alterations or imperfections in the structure of certain parts of the eye, affecting the reflecting powers of the organs; as for instance, an unevenness of the cornea, or defect in its surface; a deviation of the pupil from its natural position; an inability of moving the eyes harmoniously, so as to direct each pupil so as to bring objects into the axis of vision of each eye together. Yet, persons who squint do not usually see double, so that some other circumstances must be combined to produce the effect. A weakness of some particular muscle of the eye, however, as interfering with its harmonious movements, is alleged both by Morgagni and Sir Everard Home to be sometimes a cause of diplopia.

Removal of cataract from the eye, when the other was sound, has occasionally been followed by double vision. But this effect is not constant.

Diseases in the orbit, interfering with the movements and position of the eye, may cause diplopia.

In many examples, the cause of diplopia is doubtless dependent upon affections of the brain. This must be the case with the woman now in the hospital. The concussion of the brain has occasioned some mischief within the head, which has been the cause of this curious disorder of vision. You may find instances of diplopia brought on by injuries of the head, recorded by Hill, Schmucker, and Hennen. Perhaps in the case related by the latter, the diplopia was connected with injury of the frontal nerve, rather than with injury of the brain; for only its soft parts over the nose are stated to have been wounded. At all events, we know that injuries of that nerve are capable of producing disorder in the function of the retina.

As to the treatment of the woman in the hospital, viz. cupping, mercury, and blistering, it has proved very beneficial, so far as the history of the case goes; and I think we have every reason to hope, that the termination will be in a cure.

The treatment should of course vary according to the nature of the cause. When some defect, as spasm or weakness of a muscle of the eye is concerned, Sir Everard Home recommended keeping the organ covered, and at rest.

The next case is one of

FRACTURE OF THE THIGHBONE WITH LACERATION OF THE SCROTUM, AND OTHER INJURIES.

THOMAS Sayer admitted October 1, aged 52. A coal-heaver fell between a barge, which was in motion, and the side of the canal. The result was a fracture of the central part of the right femur—a lacerated wound of the scrotum, out of which both the testes protruded. Behind and below the great trochanter of the left side, there was also under the skin a vast effusion of blood, which soon increased to three or four pints. This extravasation had no doubt been occasioned by the rupture of some considerable blood vessel, by the violence which acted upon the part—the severity of the contusion received on the left hip. From a blow on the sacrum caused by a fall, I have known a swelling as large as a man's head, take place in the course of half an hour. The celerity with which such a tumour follows the external violence, will at once lead you to suspect, that it is caused by effusion of blood. You generally perceive a darkish blue discolouration of the integuments which lie over the effused blood, and on handling the tumour, perceive a fluctuation. There has not been time enough for inflamation to come on, or for purulent matter to form. The swelling must evidently be the consequence of extravasation of blood. On first seeing this tumour over the left hip and buttock, I had no hesitation, therefore, in stating that it arose from effused blood, and, that my experience had taught me, that, in such cases, the right way was to afford nature every opportunity of dispersing the blood which she frequently proved competent to do. In the patient who had a swelling of this kind suddenly produced over the sacrum from a fall, and which was as large as a man's head, the whole of the blood in it was absorbed in about six or seven weeks, with the aid of the muriate of ammonia lotion, and occasional purging. The dispersion of all the extravasated blood in Sayer's case, has been accomplished with equal success, though from the great constitutional disturbance, which he has experienced from the severity of his injuries, I was at one time rather fearful that suppuration would have occurred. This has not happened, however, and in the short space of five weeks, the whole of the effused blood, amounting to three or four pints has been absorbed.

Now what would have been the case, had an opening been made in the tumour? Then some of the blood would have been immediately discharged; but, a good deal of it either clotted or effused in the cellular tissue, would necessarily have been left behind. Air now having access to those clots, they would quickly have undergone putrefactive changes, and become a source of irritation to the surrounding textures. The consequence would have been profuse suppuration, and perhaps sloughing, under which, I have no doubt, this poor man would have died. Blood extravasated, and in contact with common textures, generally produces no irritation—and will sometimes continue in a cavity, lined by a serous membrane for years, without undergoing much change itself. Sir Astley Cooper mentions a case of hæmatocele, where the blood, which had been in the tunica vaginalis about seventeen years, when removed, seemed but little altered from its natural state, I mention this to convince you, that if air be not admitted to extravasated blood, it is not disposed to putrefy, and become a source of irritation.

Another objection to making an early opening in a case, like that of Sayer, is that the continuance of the subcutaneous hemorrhage would then be facilitated by the removal of the blood already effused. Indeed, where an artery of some size has been ruptured, the bleeding will be disposed to go on two, or three weeks after the occurrence of the injury. This was exemplified about a year ago in this hospital, on a woman under my care for a fractured thigh, with a copious extravasation of blood about the hip of the same side. In this instance, the blood was not dispersed, matter formed, and it was necessary to make one or two openings, for the discharge of the mixture of blood and pus. This poor woman was lost by returns of bleeding from one of these openings. In the post mortem examination, a branch of the gluteal artery was found to communicate with the cavity, in which the blood and matter had accumulated.

The case of Sayer affords instruction on another point, viz. it illustrates the usefulness of putting parts, or organs, which have been displaced in a lacerated wound, back into their natural situation, without the least delay. The protruded testes and spermatic cords, which were forced out of the scrotum, having been reduced, the wound was closed with sutures and adhesive plaster, and though some degree of sloughing and absess followed, the testes are safe, and cicatrization hereby accomplished.

SIR ASTLEY COOPER, ON ARTERIES.

(Continued from page 492.)

The effect of tying the jugular veins of the rabbit is not constantly the same in all cases; as the following instances prove.

LIGATURES PLACED ON THE JUGULAR VEINS.

In one rabbit I tied the jugular veins on each side of the neck. When it was set at liberty, it ran about, cleaned its face with its paws, and took green food.

Its respiration was reduced to 68 inspirations in a minute, which is about half the natural number. After four hours, it ran about as if nothing had happened; and eventually recovered.

When it was killed and injected, I found, on each side, three anastomosing veins passing from the anterior to the posterior part of the jugular vein, and conveying the blood from the head to the heart; but the vertebral vein had remained whole, and become enlarged; and it passed, on the fore part of the vertebræ, from the head to the space between the fourth and fifth cervical vertebræ, where it entered the vertebral canal.

In a second rabbit, I tied the jugular veins on each side of the neck, as before. The animal's respiration became slow; but it ate green food, ran about, and was difficult to catch: but for five days after it appeared dull; its ears had dropped. On the seventh day, it was seen to be convulsed, and frequently rolled over. Its voluntary powers were lost, as well as its sensation, in a great degree. On this day it died. On examination, a clot of blood was found extravasated in the left ventricle of the brain.

Hence it follows, that apoplexy will occasionally result from an obstruction to the return of blood in the jugular veins; and this I have known to happen from enlargement of the glands in the neck of a boy.

INFERENCES DRAWN FROM THE FOREGOING EXPERIMENTS.

It appears, from these experiments, that the carotid arteries are designed in these animals rather for the supply of blood to the external parts of the head than to the brain itself; whilst in pro-

portion as the brain is more developed, the carotid artery acquires greater importance. The obstruction of it influences respiration in some degree; probably, because, under these circumstances, more blood is directed to the vertebral arteries. The internal carotid branches are proportionably less than in those animals which have a large cerebrum, and are endued with higher mental faculties.

It passes to its destination, to prevent the action of the heart from influencing the brain immediately.

The rabbit quickly recovers from the operation of tying these arteries, and seems little affected by it: and in man, as well as in these animals, these vessels are obliterated without the destruction of life.

The vertebral arteries are much more important vessels, as regards the brain and its functions in these animals,* than the carotid arteries. The nervous power is much lessened by tying them; and, in these experiments, the animal did not, in any case, survive the operation more than a fortnight; although I do not mean to say that recovery is impossible. In the dog, also, the carotids may be tied with little effect; but the vertebrals have a great influence.

The effect of the operation is, immediately to render breathing difficult and laborious, from the supply of blood to the phrenic nerves and the whole course of the tactus respiratorus of Sir Charles Bell being stopped. The animal becomes dull, and indisposed to use exertion or to take food.

Very slight injuries, after a ligature has been put upon these arteries, will destroy life; insomuch, that if they are first tied, even dissecting for the carotids, without trying them, will cause death. The best method, in such experiments, is to tie the vertebrals last.

On account of the importance of these vessels, they are securely defended by bone in the greater part of their course; and it is only below the sixth cervical vertebra that they are accessible. If they were exposed to pressure, death would often be suddenly produced.

These arteries are tortuous, to prevent too sudden a rush of blood to the head; and they pass through foramina of bones, which prevents any great increase of their size; although they become somewhat larger than before, when the carotid arteries are tied, and *vice versa*.

Thirdly, compression of the carotid and of the vertebral arteries at the same moment in the rabbit, destroys the nervous functions immediately. This is effected by the application of the thumbs to both sides of the neck, the trachea remaining quite free from the pressure; when respiration entirely ceases, with the exception of a few convulsive grasps.

The same fact is evinced in a clearer and more satisfactory manner, by the application of ligatures on the four vessels, all being tightened at the same instant; when stoppage of respiration and death immediately occur.

When the dog is the subject of this experiment it loses its volition and sensation, and appears as if it were intoxicated; but the anastomosing vessels gradually restore the circulation by means of the other branches of the subclavian artery at the back and sides of the neck.

But, notwithstanding the decisive nature of the last experiment, conceiving that it might be possible that the pressure upon the nerves of the neck might have an influence in killing the animal suddenly, I made the experiments which I have detailed.

I first tried the pneumo-gastric nerves, and found that the animal lived about twelve hours, although it died on the instant when the carotid and vertebral arteries were tied: the lungs were also loaded with blood,* and twice as heavy as the healthy lung: it appears, therefore, that the change of the blood is either directly or indirectly under the influence of the par vagum.

In this experiment it is also to be observed, as a point of much importance, that the blood in the carotid arteries is found of a venous character, and dark blood circulates in the animal for some time before it dies, the blood being less arterial as the time elapses from the application of the ligature: yet the heart continues to beat; for when the artery is opened, the blood flows *per saltum*.

The blood also flows of a dark colour when the carotid is opened after the phrenic has been tied; but the lungs are not in that case found loaded with blood,

* Mr. Coleman informs me that the vessels of the horse are different; and he thinks it is designed to counteract gravitation, when the animal is feeding on grass.

* Sir Benjamin Brodie has mentioned this state of the lungs.

but possessing their ordinary weight and appearance.

In this experiment there was also a remarkable diminution of animal heat. Is this to be attributed to a cessation of that pulmonary process, accompanied by the evolution of heat wherein venous is converted into arterial blood? or does it arise from a want of that supply of arterial blood to the nerves from which they derive a capability of evolving caloric? or shall we not approach still nearer to the truth, in supposing that both these causes of a high temperature are suspended at the same time; and that there is, consequently, a double reason for the gradual departure of the animal heat observed in this experiment?

The œsophagus contained food, in some instances in which the animal had eaten after the experiment, from its muscles being paralyzed; and the stomach was full, from the arrest of the digestive function.

This nerve, then, is most important; 1st, in assisting in the support of the function of the lungs, by contributing to the changing of the venous into arterial blood: 2dly, in being necessary to the act of swallowing: 3dly, in being very essential to the digestive process.*

The pair of nerves upon which I next applied ligatures were the phrenics. As soon as these were tied, the most determined asthma was produced; breathing proceeded by means of the intercostal muscles; and the chest was elevated to the utmost by them; and in expiration, the chest was as remarkably drawn in. The animals did not live an hour; but they did not die suddenly, as they do from pressure on the carrotid and vertebral arteries. The lungs appeared healthy; but the chest contained more than its natural exhalation.

When the grand-sympathetic was tied, little effect was produced: the animal's heart appeared to beat more quickly and feebly than usual; but of this circumstance I cannot be positively certain, on account of the natural quickness of its action. The animal was kept seven days; and one nerve was ulcerated through, and the other nearly so, at the situation of the ligatures. The suppurative process was extensively set up around the ligatures. No particular alteration of any organ was observed on examination. Another animal still lives in which the sympathetic was tied nearly a month ago.

Lastly, I tied all three nerves on each side the pneumogastric, phrenic, and grand-sympathetic; and the animal lived little more than a quarter of an hour, and died of dyspnœa.

The sudden death, then, that takes place from pressure at the sides of the neck must not be attributed to an injury to the nerves, but it is owing to the impediment to the due supply of blood to the grand centre of nervous influence.

[These experiments tend to elucidate some unsettled points in physiology, and consequently in practice. It is gratifying to record the zeal of Sir Astley Cooper for the advancement of science, and to place his example before the junior members of the profession.

The succeeding paper is by Dr. Addison, and deserves attentive consideration. It is calculated to throw additional light on the diagnosis of diseases of the liver. We deem it so important, that we place it before our readers.—Ed.]

OBSERVATIONS ON FATTY DEGENERATION OF THE LIVER, BY DR. ADDISON.

This morbid condition of the liver has hitherto attracted but little attention in this country; the extremely imperfect information which we at present possess concerning it having been obtained chiefly from the French physicians; whilst even amongst them, if we except its imputed connection with phthisical disease, it must be confessed, that no advance whatever has been made towards a knowledge of either its causes or its consequences. This want of information is probably, in a great measure, attributable to our inability to recognise the disease during the life of the patient: for as we then entertain no suspicion of its existence, we fail to make the minute and connected observation of facts so necessary to the elucidation of every internal affection.

We find the utter barrenness of diagnosis upon this matter well illustrated in the candid avowal of the accomplished and experienced M. Louis, who, in his admirable work on Phthisis, observes, "Nous manquons de signes capables de la faire reconnaitre à une époque quelconque de sa durée. En vain nous avons été au-devant des symptomes qui pourraient lui appartenir, nous n'en avons recueilli aucun."

* A ligature on one nerve only does not destroy.

To supply this defect ought, then, to be the endeavour, as it unquestionably is the duty, of every one enjoying the advantages of a large hospital; and it is in this spirit that I submit to the profession the scanty materials of this communication.

When the liver has undergone the extraordinary change in question, it exhibits, when the abdomen is laid open, a pretty uniform and highly characteristic appearance. It is observed to be of a cream or pale-yellow colour, figured irregularly with brownish or deep orange spots. It is usually, though not always, more or less enlarged, and sometimes very considerably so.

When cut into, its interior is found to present an appearance somewhat corresponding to that of the exterior; excepting that the brown and pale-yellow tissues are much more uniformly distributed throughout the entire substance of the organ than they are upon its surface. It is sometimes softer, and more readily crushed between the fingers than is the healthy liver: sometimes, however, it is firmer than natural, and occasionally even of a scirrhous or almost horny hardness. It will often very perceptibly grease the scalpel, or impart an unctuous feel to the fingers; and, on being exposed to the flame of a candle, will yield a considerable quantity of fat. Although its absolute weight, when enlarged, may exceed that of the healthy liver, I am disposed to think that its specific gravity will, in perhaps the majority of instances, be found to be less: thus a liver apparently healthy was of the specific gravity 1,0625; whilst the specific gravity of two fatty livers, examined at the same time, was only 1,0275. I have, however, recently met with a case, in which the liver was not only much enlarged, but exceedingly dense and hard, and consequently, as I suppose, of great specific gravity.

The following analysis of the liver, bile, and urine of a patient whose liver presented, after death, the morbid condition under consideration, was furnished me by my friend, Mr. Golding Bird:—

"The bile differed from the healthy form of the secretion in its colour, which was of a dirty brown, scarcely partaking any thing of a green tint: it contained, in diffusion, numerous black grains, which were insoluble in water, alcohol, and alkalies; burnt without flame; detonated when thrown on fused nitre, causing the formation of carbonate of potass: hence these granules consisted of carbon nearly pure, which substance has been, I find, detected floating in the bile of a maniacal patient by Prof. Lavini of Turin (*Atti dell' Academia de Turino*, 1834). Numerous globules of oil appeared after repose, on the surface of the bile; but their quantity could not be readily determined: in other respects, the secretion presented the same chemical characters as ordinary specimens of bile. Its composition was as follows:—

Biliary matter, with an appreciable quantity of very soft fat	6,0
Earthy salts (phosphates of lime and magnesia)	0.2
Osmazome, lactate of soda and common salt	1.0
Water	92.8
	100.

The most remarkable deviation from the healthy state apparent in this specimen of bile was the peculiar odour it evolved after the addition of an acid, even of acetic. This odour was the most disgusting and least tolerable I ever met with evolved from any kind of animal product: it was quite *sui generis*, and very permanent.

The liver was next examined, for the purpose of ascertaining the quantity of fat present. One thousand grains were cut into very small pieces, and boiled in repeated portions of alcohol; the solutions being filtered, whilst nearly boiling hot, through muslin. By this process, a solution of fat and osmazome, with saline matter, was obtained: the fluid was evaporated, over a vapour bath, to dryness; and the residue digested in boiling water, to remove the salt and osmazome. The insoluble portion consisted of a soft brownish fat, very fusible, and possessing a peculiar and unpleasant odour: the quantity yielded by the one thousand grains was 47.6 grains, equal to 333.2 grains in each pound of the liver.

The urine of the same patient was examined on June 1st: it was remarkable for its extremely low specific gravity, being but 1.007: it was quite neutral; contained in suspension dense mucous flocculi; and yielded a precipitate by protracted ebullition, which was insoluble in nitric acid: it however differed from albumen, in not being *precipitated* by nitric acid. It contained but

very minute traces of the earthy phosphates. When evaporated to dryness, it left a residue, soluble partly in alcohol, and remarkable for its peculiar bitter taste, which I had never previously met with in any specimen of urine. That this bitterness is not owing to the presence of bile was evident, from its being scarcely coloured, and not yielding any change of colour on the addition of nitric acid.

Having, in the course of my experience, been often struck with a remarkable appearance of the face in certain patients—an appearance dependent not so much on the expression of countenance, as the texture and aspect of the integuments,—and having observed the exact resemblance of the appearance in each case,—I endeavoured to connect it with some corresponding uniformity in the accompanying disease; and at length arrived at the conclusion, that, *when strongly marked, it is indicative, if not pathognomonic, of fatty degeneration of the liver*. It is purely integumental; as it is not confined to the face, but may pervade the whole surface of the body; although I am disposed to think that it is earliest observable, as well as most conspicuous, in the integuments of the face and backs of the hands. To the eye, the skin presents a bloodless, almost semi-transparent and waxy appearance: when this is associated with mere pallor, it is not very unlike fine polished ivory; but when combined with a more sallow tinge, as is now and then the case, it more resembles a common wax model. To the touch, the general integuments, for the most part, feel smooth, loose, and often flabby; whilst, in some well-marked cases, all its natural asperities would appear to be obliterated, and it becomes so exquisitely smooth and soft as to convey a sensation resembling that experienced on handling a piece of the softest satin. Whether this condition of the integuments precede or follow that of the liver, and whether the two are necessarily associated in every instance, I am by no means prepared to offer a decided opinion; but having, on several occasions, confidently and correctly predicted finding the fatty liver, from having observed the particular condition of the integuments just described, I have ventured to make the crude fact known to the profession, in the hope, that, attention being once directed to such a starting point, something more interesting, and of greater practical utility, may result from its further investigation.

M. Louis, in the elaborate work to which I have already alluded, dwells upon the frequent occurrence of this degeneration of the liver, in connection with tubercular disease of the lungs. He even estimates, that it occurs in one-third of the whole number of phthisical patients in France; as in 120 cases, he met with 44 instances of the complication; and he even goes so far as to regard it as a mere part or consequence of such tubercular disease. He appears to have been led to this conclusion, by observing, that in almost every case of fatty liver there existed more or less indication of tubercular disease in the lungs; and that the developement of the fatty degeneration of the liver is not materially influenced either by the age, sex, or constitution of the patient; except, inasmuch as these circumstances affect the phthisical disease, upon which he considers it to depend.

But although this condition of the liver is most frequently found associated with tubercles in the lungs, this is far from being uniformly the case, in this country at least: and it is not a little remarkable, that within the short period of the last two months I have myself met with no less than three instances, in which not the slightest vestige of tubercular disease was discovered, either in the lungs or in any other part of the body: and it is further worthy of notice, that in two of them (Elizabeth Castline, aged 32, and Samuel Minx, aged 57) no suspicion had, to my knowledge, been entertained of disease existing either in the lungs or liver; both individuals having remained plump and fat up to the period when death took place. Elizabeth Castline died of organic disease of the brain; and the following is the account of the appearances found on dissection, furnished by Mr. King, who examined the body:—

"There was a nævus on the pia mater, near the vertex; and the ventricles of the brain were distended with two ounces of pretty clear fluid.

"The contents of the chest were tolerably healthy, and the blood in the heart was coagulated and fibrinous.

"The liver was of a large size; rather pale, coarse and close, and yielded much oil when baked in paper. Bile, pretty copious, and dark yellow, nearly to blackness. The spleen was of good size, darkish, and coarsely granular. Uterine system in a healthy condition.

S—— M—— died of pericarditis, succeeding an attempt to commit suicide by cutting his throat.

His body, when examined, was much distended, by the gaseous products of decomposition: the lungs were watery, and the pericardium lined with honeycomb fibrin: the spleen unhealthy; and the liver fatty, and presenting the usual characters of that state.

Whether any symptoms or indications attended this condition of the liver in these two individuals, or what they were, I had no opportunity of ascertaining; but what has been stated renders it sufficiently apparent that fatty liver is not necessarily associated with tubercular disease of the lungs; and that such a state of the liver is not, for a time at least, incompatible with a certain degree of bodily vigour.

The following case, which was furnished me by Mr. Barnes of Chelsea, presents an instance of an asthenic or atropic state connected with this change in the liver; which I am inclined to believe is of by no means unfrequent occurrence; and tends to shew, not only that fatty degeneration of the liver may exist, unconnected with the tubercular disease of the lungs, but that its existence may occasionally be pretty confidently diagnosticated during the life of the patient.

"In January 1835, I first saw Mrs. T., who was then suffering from a very troublesome cough, which she said was usual at that period of the year: her countenance was anxious: great emaciation, and a total loss of appetite, had taken place: her pulse was very feeble, and under 70: tongue clean: bowels generally regular; and evacuations healthy. There was no expectoration, and no perspiration. From her general appearance, I thought she was phthisical: auscultation, however, afforded no signs of disorganization; nor was her pulse such as would lead one to infer that tubercles existed, This cough continued more or less till May, when it left her. During my visits, from January to May, she occasionally suffered from sickness, which was always relieved by prussic acid; she had rarely occasion for purgative medicine. From this period, till March 1835, I heard nothing of her, and concluded she must have been under the care of some other person. Such was not the fact: she had occasionally suffered from cough, but not to any extent: her emaciation continued, and her appetite had not increased. To all appearances, no change had taken place: her spirits were greatly depressed, having lost a sister a few weeks before.

"At this time, auscultation elicited nothing satisfactory.

"The medicines which afforded relief before were now taken without any good results; and I requested permission to call in Dr. Addison.

"At that time she was able to move about; complained of great weakness, but no pain: indeed, she said she never had felt pain. Her hands at this time began to swell, towards evening; and there was also some puffing of the face. Her urine had always been plentiful, and did not appear changed: it contained no albumen.

"Dr. Addison examined the chest with great care, but could not make up his mind if disease existed there; as the stethoscopic signs led to a belief that there was no change of structure going on, whilst the general symptons seemed to favour a contrary opinion.

"Three weeks after this, œdematous swelling of the feet commenced: and finding that it had disappeared in the morning, she could not be prevailed upon to get up, for fear it should return. It may be observed, that she never experienced any difficulty of breathing; had no occasion to have the head or chest raised; and could lie on either side. Dr. Addison saw her again in a short time: he could perceive no change, excepting her increasing debility, which was occasioned by her refusing all food; her only support being a little weak wine or brandy and water. She slept tolerably well. The treatment during this consisted of small doses of blue pill, combined with extract of henbane and a grain of quinine night and morning, and a drop or two of prussic acid with a few grains of magnesia in camphor mixture: she went on thus till the end of May, when she died.

"Having obtained permission to examine the body, I requested the attendance of Dr. Addison, who had always said that this patient had a fat liver, but had been unwilling to venture a decided opinion respecting disease in the chest: the impression, however, on his mind, had been' that little, if any, existed.

"Having opened the chest, we found extensive, firm, old adhesions of the pleuræ; but we could not discover a vestige of tubercular disease in the lungs, even upon the most careful examination: they were, indeed, to all appearance, quite healthy; excepting that, like other

parts of the body, they were easily broken down.

"The heart was sound.

"When the abdomen was laid open, the liver was seen somewhat enlarged, presenting a straw colour in appearance, and rather firm. We cut a thin slice from it; and having exposed it to the flame of a candle, it did not curl, as is usual with healthy liver; but it gave out a considerable quantity of fat, which was allowed to drop on paper: the stomach was, to all appearance, healthy; excepting the mucous covering being rather hard in the follicles, and somewhat of a horny aspect. The kidneys, uterus, and bladder, were examined, and had a healthy appearance."

In this instance, I was led to form the diagnosis regarding the state of the liver entirely from the aspect and feel of the integuments, especially on the face and backs of the hands; for during the life of the patient she had exhibited no decided symptoms of disease of that viscus; and, indeed, the character and situation of the anasarca under which she had laboured led me to suspect some morbid change in the kidneys; but, on examining the urine, no trace of albumen could be detected. I think it not improbable, therefore, that this degeneration of the liver may, like mottled kidney, occasionally prove a cause of anasarca;—a supposition somewhat strengthened, by finding, on visiting her shortly before death, a great degree of anasarcous infiltration of the back, loins, and sides, exactly such as I have often found in renal disease, although with much less swelling of the legs and thighs than usually accompanies the latter. In one case, it scarcely existed at all, or at least in a very slight degree.—Could this anasarca be a mere consequence of inanition; the appetite being, as it were, completely obliterated?—Certain it is, that there was not only remarkable flabbiness of the soft solids during life; but, as I have observed in more cases than one, an extraordinary acerability and want of tenacity of the tissues generally, and of the lungs in particular, after death. As bearing upon this question, however, I may add, that I have recently seen a case in which anasarca had occurred, and again disappeared, long prior to the death of the patient. This person was a female of the name of Cowan, aged 30, under the care of Dr. Bright, in Lydia's Ward. On passing through the ward some time before her death, my attention was attracted by the peculiar aspect of the integuments already described; and, on examination of the chest, I found that she was sinking from phthisical disorganization of the lungs. Convinced that she had a fat liver, notwithstanding her stools presented a natural appearance, I interrogated her very narrowly; and ascertained, that, several months before, she had had anasarca, which disappeared under medical treatment. Upon dissection, the lungs were found studded with miliary tubercles, and there was a vomical cavity. The liver was fatty.

With respect to the causes of this fatty degeneration of the liver, very little, or absolutely nothing, is known. In most of the cases which I have met with, there has been either positive or strong presumptive evidence that the individuals had indulged in spirit-drinking; and indeed the most exquisite case I ever saw in a young subject, occurred in a female who had for some time subsisted almost exclusively on ardent spirits. On the other hand, the extreme frequency of the degeneration in France, where the people are but little given to such indulgences, throws considerable doubt upon such an origin of the complaint; whilst its great frequency there, in conjunction with phthsis, would almost lead to a belief that it has some connexion with a scrofulous tendency, a belief which, I confess, I am strongly disposed to entertain.

Connected with scrofula or not, it remains to be ascertained, whether it be in reality an original disease of the liver: or whether it may not, in every instance, be merely secondary to some other or remote disorder, is not yet determined. Future experience, also must discover what are its immediate, and what are its remote consequences;—whether feebleness of the powers generally, and of the digestive organs in particular, be sooner or later induced by it, in every instance where patients escape other mortal diseases;—whether, by impairing the powers of the constitution, it may not, in some instances, prove rather a cause than a consequence of phthisis;—whether anasarca, or any other form of dropsy, be peculiar to certain stages or degrees of it;—and, lastly, what influence it exerts upon the brain and nervous system generally, and consequently upon the feelings and disposition of the individual."

The author of the preceding paper is entitled to no small credit for the accu-

racy of his diagnosis in an obscure class of diseases; and it is to be hoped that he will prosecute his inquiries, and at no distant period elucidate the pathology of the liver. Accurate information is much wanted on the subject, and ample opportunities are afforded by one of the largest metropolitan hospitals to an accurate observer, and a faithful clinical historian.

The other papers in this volume deserve attentive perusal, and we shall place the most interesting of them before our readers.

PRIZE EXAMINATION.

We have lately had several accounts of the *questions* proposed at various examinations. The following is a detail (with a few chiefly verbal alterations) of the *answers* which gained the first prize, in a numerous class of students. The mode of examination adopted was highly satisfactory. It was nearly the same as that pursued at the London University; the candidates being put into a room by themselves, without books or manuscripts to refer to; and each paper of replies being distinguished by a motto known only to the writer.

1. Write down Cullen's definition of fever.

Cullen's definition of fever is as follows:—"After languor, lassitude, and other signs of debility,—pyrexia, without any primary local disease." But properly to understand this, we must take into consideration his previous definition of pyrexia:—"After shivering succeed a quick pulse, increased heat, with disorder of several functions, and great depression of strength, particularly of the joints."

2. What parts are true, and what erroneous, in this definition; and what important symptoms are altogether omitted?

It is true that fevers are generally ushered in by "languor, lassitude, and other signs of debility;" but then these symptoms are common to many other diseases; and it is essential to a good definition, that it should be applicable only to the thing defined. It is also true that there is a feeling of general weakness; but he has erred in ascribing this to real "debility;" whereas it is attributable only to depression of strength. The various organs are overloaded; and if in such circumstances they perform their tasks sluggishly, is it fair to attribute that to "debility?" If that were the case, how is it that the great depression of strength, in the cold stage of intermittents, is removed by the debilitating remedy—bleeding? Then as to the absence of any "primary local disease," it is very questionable whether such a case ever occurs. Had he said "any primary local *inflammation*," he might have been correct; for local inflammation may be lighted up in the course of the fever, though the original local affection might not have been inflammatory. To enter fully into the subject, would consume the whole time allotted to this examination; but I have only time to remark in conclusion, that fevers sometimes set in without shivering; and that there is no one of Cullen's symptoms which may not be absent. Hence the absurdity of symptomatical definitions.

With respect to the second part of the question—"What important symptoms are altogether omitted?"—it is to be observed that he has not mentioned precordial oppression, which is generally so prominent a symptom; and which while it remains, should always rivet the attention of the practitioner. Neither has he adverted to cold extremities, pain in the bones, nausea, dyspnæa, headach, foul tongue, &c.

3. What definition of fever would you give, on any occasion except during your examination for a degree?

It is much to be regretted that pathology is not sufficiently advanced, to enable us to give a pathological description of every disease; but before we can hope to attain this, anatomy and physiology must make much greater advances than at present. But with respect to fever, we have sufficient evidence to enable us to pronounce an opinion, with as much probability of correctness, as the subject at present admits. Avoiding any conjecture about the first link in the chain of diseased action, (which it is vain to attempt to trace,) I should say that fever begins with the balance of the circulating fluid being disturbed, which gives rise to congestion in the internal organs of the body; and thereby induces disorder in the functions of those organs; which functional derangement, if not removed by the efforts of nature or the resources of art, may go on to organic lesion. The efforts which the system makes to relieve important organs of this congested load, is called *reaction*, or the stage of excitement; to which are attributable the symptoms generally called febrile.

4. Are there any pathognomonic symptoms, during the rise and progress of fevers, from their accession to their termination?

There are no individual symptoms which can properly be termed pathognomonic; for they will vary in each case, according to the organs more particularly affected.

5. Make a short general statement of the treatment which ought to be pursued in fever.

As no two cases are exactly similar, each must be treated in a great measure on its own merits. The first indication is to relieve the congested organs, and thus to diminish the danger of inflammation; as well as to enable the system to go through the stage of reaction with less of that violence which, if left to itself, it is liable to exhibit. When the stage of reaction has supervened, attention must be directed to moderate its violence; and strict watch must be kept over every organ, lest serious disease should be lighted up in any. Nothing can be more unpathological, and I may add empirical, than to apply remedies to individual symptoms, without studying the causes whence they spring; and it were well if physicians would trust to nature more, and to art less.

6. How would you treat a case of simple scarlatina, in which there is no marked internal disease, except a slight affection of the throat?

The improved mode of treating scarlatina, and other eruptive fevers, is closely connected with the pathological view of their nature; viz., that the eruption is not the disease, but a symptom. In the case mentioned in the question, I should be careful of exposing the patient to cold, or any other cause which could produce a retrocession of the inflammatory action from the skin to more vital parts. With this view I should be careful to maintain an equable temperature in the apartment; keep the extremities warm; prescribe general laxatives; regulate the diet carefully and sparingly; and order the warm bath occasionally. The local affection of the throat, would be best treated by the inhalation of steam, if the patient could be taught to practise it; if more severe, by leeches or a blister.

7. In scarlatina and measles, which are the two most dangerous periods?

Decidedly those of the appearance and retrocession of the eruption. This has been long known; it being a popular notion that the danger in measles is in the inverse ratio of the quantity of the eruption. But it is only since more correct notions of pathology have been abroad that internal organs are regarded as the real seat of the disease, and the eruption only a "natural blister" (effecting a derivation to the surface), that the fact I have alluded to has been satisfactorily accounted for.

8. In slight cases of these diseases, which is the period at which an unpleasant aggravation of symptoms may be expected; what does it generally arise from; and how should it be treated?

I have in a great measure answered this question, in replying to the last. The period at which danger may be most justly apprehended, is that at which the eruption disappears; especially should this take place suddenly. But there is another period which, to an unpathological eye, might appear fraught with greater peril. It is that at which the eruption comes out; and this extensive inflammation causes a temporary aggravation of symptoms. But properly understood, the cause of alarm is more apparent than real; for it is often found that the violence of the symptoms, is not in proportion to the importance of the part affected; so that a common boil may give rise to more complaint, than inflammation of the most important organ. Keeping this in view, the treatment will not be a matter of hesitation. It will consist of the warm bath, and other remedies, described in my answer to the last question.

9. Give a short description of the treatment of dyspepsia, attended by occasional febrile paroxysms, and considerable tenderness in the epigastric region, somewhat increased on pressure; but without cough, or any other symptom of pulmonary suffering.

Wilson Phillip has divided dyspepsia into three stages, but we must not expect to find them in practice separated by well defined limits. The margins are not abrupt, but shaded off, and they merge into each other by insensible gradations. The only question it is necessary to consider, in the application of your medical agents, is whether the disorder is yet merely functional, or whether it has gone on to organic lesion. The fact of "considerable tenderness in the epigastric region, increased on pressure," I should consider as affording strong grounds for suspecting the latter, and if the symptoms did not yield to leeches, accompanied by attention to the

diet and clothing, with a judicious use of internal medicines, so as to keep the alvine secretions in a proper state, without resorting to irritating cathartics,—in such a case I should adopt more active local counter-irritation; such as blisters to the epigastrium, or cupping. We must be cautious of tartar-emetic ointment (though so admirable an adjunct in other cases), as it is liable to produce nausea; which in dyspepsia is scrupulously to be avoided.

10. Does dyspepsia, in the advanced stages, ever resemble phthisis? If so, state in what respects; how they are to be distinguished; and by whom this was first well and fully pointed out.

Wilson Phillip has the merit of having elucidated this point, in describing the disease which he calls "dyspeptic phthisis." The term "*phthisis*" is now restricted to tubercular degeneration of the lungs. They may both be attended by cough, dyspnæa, and the signs of constitutional suffering; such as emaciations, flushings, quick and variable pulse, and other symptoms of hectic. Profuse perspirations, diarrhœa, &c. may also supervene. They will differ, however, in the character of the expectoration; for as in simple dyspepsia there are no pulmonary cavities, the sputa will not contain the debris of softened tubercles. But in this, as well as in all other cases where the chest is concerned, our principal resource must be in the instrument invented by the immortal Laennec. Circumscribed dulness on percussion, with bronchopony at first, gradually advancing to pectoriloquism and *gargoueillement;* —not to mention the pleuritic attacks, which so often make their inroads during the march of phthisis,—will effectually distinguish it from dyspepsia.

11. How is common colic to be distinguished from the disease commonly known by the name of "painter's colic;" and both from ileus?

The symptom which is most apt to strike an observer, is probably the greater *violence* of "painter's colic;" but as the latter is produced by lead, acting as a poison on the system, it is distinguished by signs of derangement in the nervous system, in a very marked degree;—such as paralysis of the muscles of the forearm, which causes the wrist to drop. Between these two diseases and ileus, the diagnosis is more easy; for in colic great relief is obtained by pressure; and opium, by relaxing the muscular fibres of the intestines, acts as a purgative; which is just the reverse of its usual effect.

12. What are the best and most certain anthelmintics?

Every old woman has her infallible nostrum for worms; but their very multiplicity proves their inefficacy; for if one succeeded, where would be the necessity for so many? Turpentine, and cowhage given in syrup, are perhaps most deserving of attention.

13. What are the characteristics of inflammation of serous membranes; first, as to general symptoms; secondly, as to terminations;—including morbid appearances?

The symptoms will vary much, according to the situation of the membrane affected; but the general expression,—*pain on pressure or motion,*—will include a great many. Hence there is difficulty of breathing both in pleuritis and in peritonitis; in the first case from the pain caused by the motion of the pleuræ on each other; and in the last from the pain caused by the descent of the diaphragm. In peritonitis, pressure gives great pain; and the knees are drawn up, so as to relax the abdominal muscles. If the arachnoid be inflamed, there will be delirium; but it must be observed that arachnitis is much less frequent than is generally supposed. If the effusion of serum within the cranium, so often found in fevers, &c. were the result of arachnitis, it would no doubt be found within the sac of that membrane; whereas it is found between it and the pia mater; and may therefore be justly attributed to inflammation of the last mentioned very vascular membrane. For the rest it will be sufficient to say, that inflammation of serous membranes is denoted by febrile symptoms of a very high tone. The "terminations" are in effusion; first of serum, but if more active of coagulable lymph; and in recent cases shreds of the latter will be found glueing the viscera together. We must not expect always to find vascularity; for in peritonitis produced in animals opened during life, the vascularity was observed to disappear in the act of death. Adhesion is a common termination; as in pleuritis, and in the *tunica vaginalis testis* in the operation for hydrocele. In pericarditis the membrane is sometimes very rough; like the cells of the honey-comb stomach of the ruminantia. Chronic inflammation produces thickening.

14. State, as shortly as possible, the treatment of peritonitis; the case being

as yet recent, and the patient having been previously in the enjoyment of good health. After doing this, state how you would modify the practice, should the patient have been debilitated by previous disease?

In the first place I should bleed freely; leech abundantly; and pursue the other parts of the antiphlogistic treatment vigorously. The modification required in in the latter case, would principally consist in trusting more to local depletion and counter-irritation, the warm bath, gentle laxatives, &c.; the patient being supposed to be incapacitated by previous debility from bearing venesection.

15. Mention the changes produced by inflammatory action, on the mucous membrane of the bowels; and also the circumstances which may produce its discolouration, independently of diseased action in the part itself?

It is on this subject that the French school has advanced such pre-eminent claims to our admiration. Broussais is one of the most distinguished labourers in this interesting, extensive, and heretofore untrodden field of investigation. The first change produced by inflammation (judging from the analogy of the nasal mucus membrane in catarrh) is no doubt increased secretion, followed by a dry state; and if the inflammation terminate favourably, the whole ends with a profuse discharge. But inflammation more continued and severe, leads to increased vascularity, minute arterial injection, cechymosis, and at last ulceration. The latter generally begins in the mucous follicles, sometimes called the "glands of Peyer." Tubercles are occasionally found. Adhesions are very rare; and when they do occur, it is generally in the œsophagus and rectum; where partial adhesions give rise to stricture. Andral, in his Pathological Anatomy, has well treated of the appearances which may be mistaken for inflammation. See his chapters on "Hyperemia;" a state which may occur from venous congestion, an æmia of other organs, depending position, or cadaveric congestion.

16. Describe the nature, seat, and treatment of acute dysentery, as it occurs in India?

In the hands of Indian practitioners, mercury has been much abused in this disease. Its "nature" is inflammatory; and its "seat," the mucous membrane of the large intestines. As occurring in India, it is to be distinguished from the milder cases of this climate, by the sudden violence of its attack, and the great quantity of scybalæ discharged. The "treatment," however, is to be conducted on the same principles; but with a vigour corresponding to the greater violence of the disease. The bowels should be evacuated of all offensive and irritating matter; calomel and opium given; abstinence enjoined, leeches numerously applied to the abdomen, followed by large poultices, the warm bath, &c. If the patient can bear it, bleeding should be tried. Leeches to the anus will be found useful in controlling the diarrhœa; and large emollient enemata are to be injected.

17. How are you enabled to distinguish bronchitis, in its different stages, from pneumonia; and pneumonia from hæmoptysical induration of the lung?

The invasion of the disease differs in the two cases. In pneumonia there are much more decided febrile symptoms; and the difficulty of breathing comes on more gradually in bronchitis. The sputa also differ; for though you may have sanguinolent expectoration in bronchitis, from some abrasion of the mucous membrane, yet the blood will be in streaks, and not intimately mixed with the sputa, as in the prune juice coloured expectoration of pneumonia. Then the crepitous *râle*, so evident in pneumonia, is not heard in bronchitis; and in the second stage of the former (hepitization, or red softening) the dulness on percussion is decided and circumscribed. This state will be distinguished from "hæmoptysical induration," by its having come on gradually, and its having been preceded by the crepitous *râle*, and other characteristic symptoms.

18. State the diagnostic signs which would enable you to distinguish between empyema, and emphysema of the lungs?

In both cases there is feeble respiratory murmur? but in the former there is *dulness* on percussion, and in the latter *morbid clearness*. In empyema the sound on percussion varies according to the position of the patient, as the effused matter flows from one part of the chest to another. The previous disease is also to be taken into consideration. Empyema may be the result either of a pleurisy, or of the bursting of a phthisical cavity into the pleural sac. In either case you have the previous history as a guide; but this is scarcely necessary, from the decided results of auscultation and percussion.

19. Enumerate the *ordinary* symptoms of inflammatory affections of the chest; and state which are *pathognomonic?*

The symptoms are cough, dyspnœa, præcordial oppression, anxiety of countenance, pain, quick pulse, and expectoration of various kinds; with a general febrile state. There is no one of these, however, that may not be sometimes wanting, or that may not be present without indicating positively inflammation within the chest.

20. State the most approved treatment of pneumonia, where the disease is recent; and then describe that which you would pursue, supposing the disease had gained considerably ahead of you.

No disease more decidedly shows the advantage of active antiphlogistic treatment than pneumonia. In a recent case bleed fearlessly till an impression is made; and follow it up, if necessary, at a short interval. You will thus obtain your object at a much less expense of blood, than by taking a few ounces at intervals. Persons treated in the latter mode have recovered; but have suffered severely for months, under the debilitating effects of the remedy. Tarter emetic is also of decided advantage; and such is the tolerance which the constitution acquires for it, that it is given in Italy in large doses. It is wrong however, to attribute its original application in this disease to the practitioners there; for it was long before employed by Cullen and others. Should any local pain occur, from the pleuritis which often attends pneumonia, leeches are to be applied. I need not go over again the rest of the antiphlogistic measures; but in cases where the disease had "gained ahead," I should be more sparing of bleeding, and trust more to auxiliaries. An eruption produced by tartar-emetic ointment, is often of admirable service in chronic cases.

21.—In which disease can you employ venesection latest, *pneumonia* or *bronchitis?* And state the grounds of your opinion.

In pneumonia, decidedly. The patient's safety, in the latter stages of bronchitis, often depends on his ability to expectorate the mucous secreted; and venesection, by diminishing the strength necessary to effect this, is decidedly to be reprobated.

22. Describe the different pathological states of the body, on which the disease commonly known by the name of "*asthma*" depends; and how it ought to be treated.

Asthma is a notable example of the old unpathological way of treating medicine;—a symptom being magnified into a disease; of which various subdivisions are given by Mason Good and others. The assistance of spasm has been called in;—as in other cases where a cloak for ignorance is necessary. The most common cause of asthma, is chronic bronchitis; of which any slight aggravation (as from a cold wind, damp sheets, &c.) brings on a fit of asthma. It is also very frequent in diseases of the heart. It may also be the result of pulmonary emphysema, chronic pleuritis, (by the effusion from which the lung is pressed into a small space) and of any cause by which the volume of air received into the lungs is diminished. It is a symptom of the "*phthisislaryngea*" of Bayle. It will also be produced in a remarkable manner, by the entrance of air into the pleura; whether from an external wound, or a communication with the bronchial tubes. For in this case, when an effort is made to expand the chest, by the muscles of inspiration, the air enters the pleural cavity, instead of the air cells; and thus the requisite changes of the blood are not produced. Hence the dyspnœa, violent palpitations, &c., included under the term "*asthma.*"

23. Describe, according to Laennec, the diagnostic signs between hypertrophy and dilatation of the heart; as well as those which are supposed to announce extensive disease of the valves.

According to Laennec, the principal sign for hypertrophy of the heart, is increased *impulse;* and for dilatation, increased extent of *sound.* In the former you have a strong "whacking" pulse; and a violent blow is felt against the side of the thorax. There are great dyspnœa, oppression, and anxiety, much increased by muscular exertion, and mental emotions. In dilatation the sound (confined, in the healthy state, to the left side of the thorax anteriorly) advances successively to the right side anteriorly, the left side posteriorly, and the right side posteriorly. Diseases of the valves are marked by *bruit de soufflet,* and *bruit de râpe;* the names of which sufficiently indicate their character. Should the new views advanced by Stokes and Hart, and advocated by Corrigan, be substantiated, considerable modifications must be introduced into the views, previously entertained with respect to the sounds of the heart.

LONDON MEDICAL EDUCATION, KING'S COLLEGE, STRAND.

PROFESSOR Green's project of establishing a Steam Navigation Company for transporting the students from the Strand, at the Waterloo stairs, to St. Thomas's Hospital, having failed, the medical faculty of King's College now cast their rapacious, but clouded visual organs, towards the hospital at Charing Cross,—and a system of jobbing and intrigue ensued) which have proved to be the ruin and entirely destroyed the respectability of an institution, ostensibly founded for the purposes of BENEVOLENCE, and for the exercise of *Christian Charity!* The history of the whole proceedings connected with this intrigue, are, however, highly creditable to the *talent* of the medical officers of KING'S COLLEGE; and afford a most convincing proof of their earnestness in supporting *conservative principles,* and of their devotion to the interests of the ESTABLISHED CHURCH. However plausible the Charing Cross speculation may have appeared to some of the more aspiring and younger professors, yet the more judicious and long-sighted members of the faculty deeply lamented the difficulties which Mr. Green met with in establishing a steam boat; they distinctly saw, that the advantages which would have accrued from a passage-boat plying between Waterloo stairs and St. Thomas's Hospital would have been twofold. It would have fully remunerated the ingenuity of the inventor, by adding a small number to the already decayed list of students at St. Thomas's Hospital; whilst it would have also been the means of seducing an occasional straggling student from the Borough schools. Professor Green indulged in the hope that both parties might have been essentially benefited, and many students induced to enter into the speculation, as the voyage would form a pleasant recreation to the more studious pupils, whilst another class would be highly entertained with the *refreshments* and *cordials* which the steward of the vessel would liberally provide them. It ought to be here noticed, that the Archbishop of Canterbury in order to give all that *spiritual* countenance, which his high prerogatives afford, had annually invited the whole Body of the Professors to a Banquet; the effect of which had been found a most powerful *incentive* to their Christian duties: it was therefore thought a most plausible speculation to hold out a *moderate* ANIMAL gratification to the student, had the steam boat enterprize been realized. The Charing Cross Hospital had now acquired an imposing rank, having been recognised by the liberality and wisdom of the council of Lincoln's Inn Fields, for it was quite evident, that however *charitable* may have been the views of the director, Doctor Golding himself, it could not be expected that his medical staff could take any interest in the education of youth, until they had the means of acquiring an adequate remuneration. To receive the *recognition* of the Royal College of Surgeons, became an object of primary importance to all those interested in the success of the new institution. The most strenuous efforts were made by the medical officers to accomplish this most desirable object; and, fortunately for their praiseworthy purpose, one of their surgeons was a member of the sacred conclave of Lincoln's Inn; they were charitable enough, and sufficiently liberal to accede to his wishes. Having embarked a capital of no less than £500 in acquiring his position, the members of the council of Lincoln's Inn could not have conscientiously or consistent with their principles and practices deprived him of what appeared a plausible channel of re-imbursement. But before they could grant the recognition it was incumbent upon them to receive the most unequivocal proofs of the accommodations and competency of the hospital for medical and surgical education, and more particularly, that there should be not less than 100 beds. The hospital had already been furnished with upwards of 120 beds, a number greater than is supposed by the council as necessary for the education of a surgeon. The only difficulty which the directors and the distinguished member of their own council had, was to procure and find the means of supporting not less than 100 *occupants;* and the only devices they could fall upon was one which was most satisfactory, and completely answered the views, purposes, and laudable objects of the inventors.

As it was perfectly impossible to nourish and support upwards of 100 patients for more than three days, such were the limited funds of the institution, it was arranged, that on a day being fixed upon for two members of the council of the college to inspect the hospital, that *invalids* should be provided to occupy the beds on the preceding night, it being under-

stood, and distinctly explained to them, that they should return to their homes on the following day. Accordingly a sufficient number of patients were selected from the workhouses in the immediate vicinity of Charing Cross, and they were induced to lend their valuable services upon this interesting occasion, receiving an earnest assurance, that they would be liberally supplied with food, and receive every SPIRITUAL comfort which that institution so amply and generously affords upon all *special* occasions. An official notice was transmitted to the constituted authorities; that a select deputation would arrive at one o'clock, P. M.; the arrangement having been *silently* made some days previously, so that every necessary preparation could be made for the edification of the delegates. At the appointed hour Sir Astley Cooper, accompanied by Sir Benjamin Brodie, arrived at the hospital, and were graciously received by the medical staff, and after performing the *responsible* duties imposed upon them by the Council of the College of Surgeons, and gone through all that *rigorous scrutiny* which they deemed requisite, they expressed the highest satisfaction. Every laudible effort was now determined to be made by King's College to form an union with the Charing Cross Hospital. The Rev. Principal of the college was very properly selected as the most fit and enterprising individual for arranging this "*Holy Alliance,*" consistent with the established usages and principles of the institution, it was distinctly understood by the medical faculty, that the *Dignitary of the Church* should be authorised to make such arrangements with the Charing Cross medical staff, as would not only give the professors some immediate appointments, but that should ultimately place within the *grasp* of the college the whole offices of emolument and patronage of the hospital. Unfortunately for King's College, and the benefit of its eminent professors, it was found to be inconsistent with the *temporal* interests of the *benevolent* and *charitable* individuals of the Charing Cross medical staff, to give up any of their appointments; whilst they of the hospital were very properly anxious to obtain for themselves some of the distinguished and most exalted official positions at King's College. But a difficulty of much greater magnitude presented itself when the arrangements became matter of calm and serious deliberation; and the various interests connected with the two establishments were duly weighed. Successive conferences were held. Protocol after protocol passed between the diplomatists, but it was found quite beyond their powers to arrange matters in such a manner as would be conducive to the *interests* and satisfactory to Dr. Golding.

He therefore strenuously opposed all the projects of the "*Holy Alliance.*" At that period Dr. Golding was justly considered as the director general of Charing Cross Hospital. It was a child absolutely begotten by himself, and nursed and reared with his most tender care and parental solicitude; so that whenever he perceived his *offspring* likely to be *torn* from him by the carniverous tribe of King's College, he clung to it with increased enthusiasm, and cherished its affections with an ardour highly creditable to his feelings of christian charity, and equally creditable to his benevolence as a member of an enlightened community. He had a *right* to expect an *adequate* reward for all his solicitude and laborious services: a reward which his intelligence clearly saw could never have been derived from any union with King's College; an institution which a man of much less penetration than Dr. Golding could see was fast approaching to a speedy dissolution.

Drs. Pettigrew and Sigmond, who formed the most active and able medical officers at Charing Cross Hospital (or, as it has humourously been called by Sir Astley Cooper, the "*Golden* Cross Hospital"), were not to be chilled in their exertions by the CHARITABLE VIEWS of Dr. Golding, being eminently qualified to fill all the chairs at King's College. Both these distinguished individuals, animated with a proper zeal for the advancement of medical science, foresaw that an union with King's College would be most essential for their own interests, and more particularly for the interests of both institutions. The feeble and impotent state of King's College, and the impoverished condition of the Golden Cross Hospital, bore ample testimony to the *Council,* of the beauty of the building, the *rigid economy* of the director of the institution, the scientific and skilful management of the sick, and the very interesting nature of many of the *in-patients'* cases!

But when the liberal and enlightened views of Drs. Pettigrew and Sigmond were discovered by Dr. Golding, it became imperative on him, consistent with

his *conservete* principle and *parental* feelings to check their machinations, and to adopt such measures, as he in his wisdom saw expedient, in order to protect and ever aftewards to preserve his darling child within his own *control, direction,* and *management*.

In this state of desolation, and deserted by almost every one of those eminent individuals, who had hitherto occupied the chair, and filled up some of the most important offices; do we find King's College, in the autumn of 1836, making its last struggle for existence.

Sir Henry Halford, Sir Astley Cooper, and Sir Benjamin Brodie, had all in their turn deserted this institution, in the success of which they had embarked their fondest hopes; and it was not to be wondered at that they should have felt confident the patronage which it was to have secured to their hands, would have become a lasting source of gratification to themselves, and of emolument to their dependants.

Sir Henry Halford had good reason to be chagrined, in the unsuccessful efforts which he made to provide for his two nephews, the two Doctors Hawkins. Sir Astley Coopef became so ashamed of his connection with the Strand Joint Stock Company, that he cautiously withdrew himself: whilst Sir Benjamin Brodie, with consummate skill, peculiar to himself, affected to disconnect himself wlth the tottering fabric, imputing to Sir Henry Halford a withdrawal of that patronage which had been so confidently and generously bestowed upon him.

There can indeed be no stronger proof of the estimation in which the medical school of King's College is held by the public, than in its number of pupils, which though they have been since the first year of its foundation gradually decreasing, have amounted this last session to not less than 21 new pupils: a number which affords a most convincing proof of the talents and capabilities of the professors of the King's College, and the extent of influence which ministers of the established church, and the aristocracy of intellect exercise on the medical community in this metropolis.

ANGLICUS.

METROPOLITAN UNIVERSITY.

IN a former number we published the draught of the charter of the Metropolitan University, and are now enabled to present to our readers a list of the first Fellows and Examiners. We shall also extract two paragraphs which contain all that is interesting to medical candidates.

"And for the purpose of granting the degrees of Bachelor of Medicine, and Doctor of Medicine, and for the improvement of medical education in all its branches, as well in medicine as in surgery, midwifery, and pharmacy, We do further hereby will and ordain that the said Chancellor, Vice-Chancellor, and Fellows, shall from time to time report to one of our principal Secretaries of State, what appear to them to be the medical institutions and schools, whether corporate or unincorporated, in this our metropolis, or in other parts of our United Kingdom, from which either singly or jointly with other medical institutions and schools in the country or in foreign parts, it may be fit and expedient in the judgment of the said Chancellor, Vice-Chancellor, and Fellows, to admit candidates for medical degrees, and on approval of such report by our said Secretary of State, shall admit all persons as candidates for the respective degrees of Bachelor of Medicine and Doctor of Medicine," &c.

"That the said Chancellor, Vice-Chancellor, and Fellows, shall have power, after examination, to confer the several degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Doctor of Laws, Bachelor of Medicine, Doctor of Medicine, and to examine for medical degrees in the four branches of medicine, surgery, midwifery, and pharmacy, and that such reasonable fees shall be charged for the degrees so conferred as the said Chancellor, Vice-Chancellor, and Fellows, with the approbation of the Commissioners of our Treasury, shall from time to time direct."

Then comes the following list:—

"Our right trusty and well beloved cousin, William Cavendish, Earl of Burlington (Chancellor).

The Right Rev. Father in God Edward Lord Bishop of Durham.

The Right Rev. Father in God William Lord Bishop of Chichester.

Our right trusty and well beloved Councillor Henry Baron Brougham and Vaux, and

Our trusty and well beloved George Biddel Airy, Esq. our Astronomer Royal, and Fellow of the Royal Society.

Andrew Amos, Esq. Barrister-at-Law.

Thomas Arnold, Doctor in Divinity.

John Austin, Esq. Barrister-at-Law.

Neil Arnott, Esq. Doctor in Medicine.

John Bacot, Esq.

Francis Beaufort, Esq. Captain in our Royal Navy, Hydrographer of the Admiralty, and Fellow of the Royal Society.

Archibald Billing, Esq. Doctor in Medicine, and Fellow of the Royal College of Physicians.

William Thomas Brande, Esq. Vice-President of the Royal Society.

James Clarke, Esq. Doctor in Medicine, Fellow of the College of Physicians, and of the Royal Society.

Philip Cecil Crampton, Esq. Doctor of Civil Law, Fellow of the Royal Society, and our Surgeon-General in Ireland.

John Dalton, Esq. Doctor of Civil Law, and Fellow of the Royal Society.

William Empson, Esq. Barrister-at-Law, Professor of General Polity and the Laws of England at the East India College.

Michael Faraday, Esq. Doctor of Civil Law, Fellow of the Royal Society.

Sir Stephen Love Hammick, Bart. Doctor in Medicine, Fellow of the Royal College of Physicians and Fellow of the Royal Society.

John Stephens Henslow, Clerk, Master of Arts, Professor of Botany in the University of Cambridge.

Cornelius Hewett, Esq. Doctor in Medicine, and Downing Professor of Medicine in the University of Cambridge.

Thomas Hodgkin, Esq. Doctor in Medicine.

Francis Kiernan, Esq.

John George Shaw Lefevre, Esq. Fellow of the Royal Society.

John William Lubbock, Vice-President and Treasurer of the Royal Society, (first Vice-Chancellor.)

Sir James M'Grigor, Baronet, Doctor in Medicine, Doctor of Civil Law, Fellow of the Royal Society, Fellow of the College of Physicians, one of our Physicians Extraordinary, and Director-General of the Army Medical Board.

Richard Rainy Pennington, Esq.

Jones Quain, Esq. Doctor in Medicine.

John Rideout, Esq.

Peter Mark Roget, Esq. Doctor in Medicine, Secretary of the Royal Society.

Nassau William Senior, Esq. one of the Masters of our High Court of Chancery, and Fellow of the Royal Society.

Joseph Henry Gerrard, Doctor of Laws, Principal of the Bristol College.

Richard Sheepshanks, Clerk, Fellow of the Royal Society.

John Sims, Esq. Doctor in Medicine.

Connop Thirlwall, Clerk, Fellow of Trinity College, Cambridge.

James Walker, Esq. Fellow of the Royal Society, and

Henry Warburton, Esq. member of the Commons House of Parliament and Fellow of the Royal Society.

THE NEW METROPOLITAN UNIVERSITY.

We most cordially congratulate our professional brethren on the foundation of this new establishment.

Ever since the meeting of medical reformers which took place now ten years ago, at which meeting, Mr. Lawrence, who was in the chair, so ably stated the corrupt state of our medical corporations, there has been an almost universal feeling and desire to see a reform take place in medical legislation. Such, however, was the nature of our corporations, and so firmly were they engrafted on principles of monopoly and corruption, that every dispassionate and disinterested individual was bound to admit it was impossible to devise any salutary measures of reform, without first destroying the whole fabric of the Colleges of Physicians and Surgeons, and the Worshipful Company of Apothecaries. The enormity of abuse, the fraudulent bye-laws, and the system of monopoly which was exposed in the examination of the witnesses made before the medical committee of the House of Commons, whilst it struck terror and dismay amongst the ruling bodies of the medical corporations, made a most powerful impression on the legislature, and the exposition then made of the corrupt state of the medical corporations has led to the formation of the Metropolitan University.

In the formation of the University there were two important points which the government were anxious to accomplish; the one to confer degrees, and the other to give licenses to the graduates to practice their profession. The first of these objects only they have now fulfilled, but difficulties arose which rendered it impracticable as yet to accomplish the second.

The power of the senate to grant degrees will at once have a most salutary influence in the various medical schools throughout England, more particularly on those of the metropolis, as hitherto

the medical student could only obtain a diploma from the College of Surgeons, or a license from the Company of Apothecaries, by submitting to a most iniquitous system of extortion, and he could only get a medical degree to enable him to get admission to the college of physicians, by forfeiting all the advantages which the metropolis affords as a field for medical study, or by purchasing a medical degree from some of the foreign Universities. The power, therefore, of conferring degrees by the new Metropolitan University, may be hailed by the student as a boon from the government of the highest value, whilst it may be justly considered as a death-blow to our medical corporations.

In framing the charter, which task devolved on the Chancellor of the Exchequer, every effort was made by the monopolists to check and distort, if they could not completely overthrow, the foundation of the new establishment, deputations of the corruptionists had frequent audiences of Mr. Spring Rice, and it could not have been a difficult task for them to show him, that if a University was established, its operation could not fail ultimately to destroy every means of their existence.

Mr. Spring Rice's first endeavour was so far to consider the interests of the rulers of the Colleges of Physicians and Surgeons, that he invited them to have a share in the formation of the senate of the new institution. Selfish, fraudulent, and debased as many of the individuals may be supposed to be, it could not have been expected, neither did the Chancellor of the Exchequer anticipate, that any one of them would have had the courage to desert their profligate allies; there is a high moral feeling and sentiment of honour which is said to exist even amongst thieves; and on this the wily Chancellor of the Exchequer seems to have most judiciously calculated, so that by selecting the most *notorious* characters, those to whom he paid the high compliment of offering a place in the senate, they manfully rejected the office.

To those who are not acquainted with what has been going on behind the scenes in Downing street, this admirable ruse of the Chancellor, will satisfactorily account to them, for none of those names being enrolled in the list of the senate, who have been ever foremost in advocating and protecting monopoly, and in establishing fraudulent bye-laws. When these eminent individuals, however, found that all their intrigues failed, and that the charter of the Metropolitan University was actually about to be framed, they were in no small dilemma, in consequence of having refused the polite invitation so aptly given to them, when the matter was scarcely more than surmised by the Chancellor of the Exchequer; and as a last effort, they now used every argument with Mr. Spring Rice, and assailed him with every species of whipping, to induce him to nominate their own companions in vice, men of steel, for the offices in the senate.

We shall on a future occasion, enter into a detail of the different appointments. It is sufficient for the professional public to be satisfied, that whilst it was unavoidable to innoculate the new Institution, with a certain quantity of poison, the antidote has been plentifully administered; and we feel quite confident, that the first object of the New University, will be amply and speedily brought into operation.

CIVIS.

NORTH LONDON HOSPITAL.

Hæmorrhage from the Bowels.

George Collings, aged 30, was admitted August 25th, under the care of Dr. ELLIOTSON. Is a stone sawyer—robust man—sanguineous temperament—moderate habits. About a week since was engaged in turning a block of marble, and had occasion to press on a crowbar with his abdomen. At this time (6 o'clock, P. M.) he felt a pain in the part, and went home to bed. He fancied himself well enough to go to work next day, but after using a little exertion the pain returned. When his bowels were relieved he discovered he was passing blood, and thinks that at the time he lost about a pint. After this his bowels were relaxed about fourteen times, and each time he lost blood. Three days afterwards he felt as if his bowels were knotted, aud they were so tender that he could not bear the pressure of the bed clothes upon them. Four days after the accident some opening medicine was given by a medical man. This relieved the pain. He was recommended, however, to come to the hospital, but hoping he should get better he stayed at home. Since which he has been getting weaker and weaker, and has suffered from constant pain in the abdomen. There is at present soreness and tenderness of the

abdomen, but not so violent as it was. Has not passed any blood lately by stool. Tongue white; pulse 120, soft; great thirst; no appetite. Bowels open.

26.—

Hirudines xvj.—abdomini.

℞ Hydrarg. submur. gr. v.

Opii pulv. gr. i—night pil. h. s.

℞ Olei. Ricini gvj....cras mane.

27. Better, but very weak; no blood has passed.

Rep. Hirudines xvj.
Rep. Medicamenta.

29. Some tenderness still, but he is much better.

30. Still a little tenderness; a senna draught daily.

Went on improving till the 10th of September, when he was discharged, cured.

MEETING OF GUY'S HOSPITAL STUDENTS.

On Monday evening the 19th instant, a meeting of the Students of Guy's Hospital was held in the great room of the Three Tuns Tavern, Borough, for the purpose of taking into consideration, the circumstances connected with the disturbance, that took place at the Operating Theatre of St. Thomas's Hospital, on Friday the 16th; and of adopting such measures as might appear necessary, to vindicate themselves and their friends, from the charges brought against their conduct on that occasion. Although notice of the meeting had not been given before half past 4 o'clock, on the same evening, then at 8 o'clock, not less than 150 students had assembled. On the motion of Mr. Lever, seconded by Mr. Ruowles, Mr. Blackburn was called to the chair.

Mr. Blackburn, expressed his sense of the honour conferred upon him, by inviting him to preside on that (to the parties asssembled,) most important occasion. All present were aware, that a disturbance had recently taken place in the Operating Theatre of St. Thomas's Hospital. In consequence of that disturbance, warrants had been taken out against three of their fellow students —three whom all knew to be distinguished for their gentlemanly manners and behaviour. (Cheers.) Believing these charges to be without foundation, the students of Guy's had resolved to meet together for the purpose of investigating and preparing the evidence—well convinced, that a fair examination would be sufficient to rebut these charges, and to hurl them back on the heads of their authors. (Great applause.) The meeting was, therefore, purely a business meeting, and he trusted, that he he should be understood to express the sentiments of the three gentlemen chiefly interested, when he intreated that the business might be conducted with the utmost brevity and harmony. The plan to be proposed had been drawn up with the full concurrence of these gentlemen: they thought it the one best calculated to attain the common object, and he trusted, that no time might be lost in needlessly discussing its merits. In order to set a good example of brevity himself, he should now conclude, by calling on Mr. Tweedie to bring forward the first resolution. (Great applause.)

Mr. Tweedie said, he had much pleasure in having this opportunity of identifying himself with those who had so lately been his fellow students, and to whom he felt himself bound by ties of friendship and many pleasant recollections—because he was persuaded that the students of Guy's Hospital had been most unworthily treated by the doorkeeper and others placed in "a little brief authority," at St. Thomas's. (Great cheering.) It appears, that on Friday last, two operations for lithotomy were to have been performed at St. Thomas's, and a large concourse of students were collecting to witness them. Several gentlemen from Guy's, in accordance with their usual custom and undoubted right to do so (cheers) presented themselves for admission at the door of the theatre, and having upon former occasions sustained inconvenience from the insolent conduct of the porter, (hear! hear!) who has seemed, habitually, to treat the Guy's students with incivility and wanton disrespect; (hear! hear!) they, upon this occasion, took care to be provided with their cards of admission. Two of the dressers from Guy's were proceeding to their proper seats, having shown their tickets, when they were wantonly assaulted and rudely pulled about by two menials in the garb of porters, stationed within the theatre. When these gentlemen remonstrated, a disturbance took place, and their friends at the outer door, imagining that personal violence was being inflicted, burst open the door and rushed to their rescue. (Great applause.) Upon these circum-

stances, an unjust charge of assault had been brought against the two gentlemen already mentioned; and a third who was *not in the Hospital at the time*, was summoned for breaking down the door. (Loud cries of oh! oh!) He believed that no difficulty would be found in disproving these allegations, and in demonstrating that the assault, and whole consequent disturbance originated in the misconduct of those who had now the audacity to add false accusations to their brutal violence. (Immense cheers.) Believing the students of Guy's generally, to be identified in these proceedings, he had much pleasure in moving the following resolution :—

"That the students of Guy's Hospital, having understood that certain charges arising out of the recent disturbance in the operating theatre of St. Thomas's Hospital, are brought forward against Messrs. Musgrove, Carrington, and Lingwood, three of their fellow students, and believing these charges to be without foundation—resolve to combine for the purpose of investigating the evidence, and laying it fully before a proper tribunal."

Mr. Tweedie sat down amidst great applause.—*Mr. Tamplin* willingly seconded the resolution, which was put and carried without a single dissentient.

Mr. Gaselee, in submitting to the meeting the resolution with which he had been entrusted, availed himself of the opportunity of expressing the regret which he always felt when the pupil's attention was abstracted from his pursuits by the agitation of topics foreign to his studies, but the nature of the present question was a sufficient justification for this momentary interruption; for it was in reality a question whether the pupils of this establishment were to be allowed to avail themselves of privileges to which in their studies they were entitled elsewhere, without interruption or insult. (Cheers). He considered this as a question not affecting one or two pupils, but the school at large, upon which a stigma of misconduct had been levelled by some of the officers of St. Thomas's Hospital; for the moment that the pupils of St. Thomas's had been desired by Mr. South (very audible groans) to separate themselves from the pupils of Guy's, it was clear that the imputation was cast on the whole, and the odium of misbehaviour (if any) was attempted to be removed from the shoulders of the few, to be affixed to the body of the school at large. The events which have taken place at St. Thomas's this very day fully justified him in the assertion, for a cry had been raised there for a total separation of the two hospitals, fortified, perhaps, by a sense of the benefits which they have already reaped by shutting out this establishment from a participation in the emoluments of their's. (Great cheering.) He was farther surprised at the unceremonious ejection which two of the accused gentlemen experienced when they afterwards went over to the steward of St. Thomas's, with an anxious desire to afford such explanations on their part as should effect an amicable or satisfactory adjustment of what had occurred. The spirit of the resolution which he (Mr. Gaselee) had to submit was conveyed in the words which expressed it. Its object was to obtain evidence in vindication of his accused fellow students in such a manner as should, under legal advice, be available at the judicial investigation. (Cheers.) Nobody denied that a scene of confusion had occurred; every body regretted it; but the gentlemen against whom the present charges were brought, were in reality (as has been stated by Mr. Tweedie) first rudely assaulted, and naturally resented such treatment; and it was highly desirable that the evidence should be adduced in such a manner as would completely rebut the charges which were brought against the three on whom warrants had been served. (Hear, hear.) No three gentlemen (he added) could have been selected from the school upon whom the imputation intended to be conveyed could have been aimed with a greater *primâ facie* evidence of its untruth for they were each distinguished in the school for his general propriety of demeanour. (Immense applause).

Mr. Gaselee then added, I am not aware that the conduct of the porters at St. Thomas's has ever before led to such a crisis as this, but I have no hesitation in bearing testimony to the uncouth behaviour which, on former occasions, I have witnessed, and which, though not present on this occasion, I can readily believe to have been repeated—(hear, hear). Identified as I am (though the days of my pupilage may have passed away) with the general interests of the pupils against whom this wholesale charge of misconduct is brought, I avail myself of this opportunity of expressing my sentiments, and am proud to witness the

manly but temperate resolution which they have formed to meet the charges which are brought against them, in a manner which shows that, conscious of innocence, they have no desire to shrink from that legal investigation to which their accusers have led them; and that they are anxious to maintain unsullied that character for honourable and gentlemanly demeanour which has so long characterized our school. I propose the following resolution—

"That for the purpose mentioned in the first resolution, a committee consisting of Messrs. King, Tweedie, and Blackburn be appointed to collect the evidence and prepare the defence; and that all those who can furnish any information, be urgently requested to place themselves immediately in communication with this committee." (Mr. Gaselee sat down amidst loud and long cheering.)

The resolution was seconded by Mr. Morrish, and carried unanimously.

The Chairman then said that the meeting would see the propriety of immediately proceeding to the investigation proposed, and requested that all those who had any evidence to offer to remain in the room, and those who could communicate nothing, to withdraw. The committee would assuredly discharge the duties imposed on them with all the energy and ability of which they were masters. They had the assistance of one of the most eminent solicitors in London, Mr. Piel, by whose advice they should be guided; and they had no doubt, that by proceeding in a calm and determined spirit, the matter would be brought to a successful issue (Cheers).

Thanks were voted to Mr. Blackburn for his conduct in the chair, on the motion of Mr. Tamplin, seconded Mr. Musgrove, and the meeting which was conducted with the utmost harmony, and with the greatest forbearance towards the parties who had attacked Guy's pupils, then broke up. A large number however remained, anxious to bear testimony to the facts of the recent disturbance; and the committee, aided by the solicitor, were engaged till a late hour in examining the evidence.

Dr. Bureaud's claim to the introduction of the chloride of zinc into use in England, and his rejoinder to Mr. Ure.

Sir,—I really feel sorry, that the mistaken zeal of Mr. Frederick Williams, of Pentonville, should lead Mr. Ure, (with whom I was once intimate,) into a discussion which can be of no advantage to him; but facts must now speak for themselves.

One of my first patients in London, for whom Sir Astley Cooper was also consulted; died of an ulcerated cancer of the womb. This case was published in my work on *Leucorrhœa*, which appeared in March, 1834. As there was no French physician in London, who specially treated diseases of the womb, many patients repaired to Paris in order to consult Lisfanc, and Recamier; but on my settling in London, I was so frequently consulted, by individuals affected with cancers, and malignant diseases, that I gave special attention to the subject, besides which I had private reasons for so doing.

In January, 1835. I received a volume of the Encyclographie, containing the re-impression of the Parisian Medical Journals, and my attention was arrested by the account of a meeting at the Academie de Medecine, on the 25th of November, relative to the chloride of zinc introduced by M. Canquoin, though the debates that followed, were by no means calculated to produce confidence in the mere medical agent; yet the meeting of the 2nd December, was still more tumultuous than the former one, and M. Velpeau, even accused M. Canquoin of attempting to impose on the academy, and deceive the public. The incomplete and inexact proportions given by M. Canquoin, was then rectified by M. Velpeau.

In February, 1835, M. Mollerat, a noted French chemist, again mentioned to me the discovery of chloride of zinc in cancerous affections. To M. Mollerat's opinion on this subject, I could not assent, and I also opposed the debates of the Academy of Medicine; admitting at the same time, that if what M. Canquoin advanced was correct, it was certainly an additional resource, and a progressive step in science.

At this period, Mr. Alexander Ure came very often to my house, I called on him, and I imparted to him the communication I had received from M. Mollerat. I lent also Mr. Ure the two volumes of the Encyclographie, containing the stormy debates in the Academie de Medecine, about M. Canquoin and the chloride. When M. Mollerat left London, he promised to send me every possible information respecting the chlo-

ride of zinc, and on the 13th of April, 1835, I received the accompanying letter.

"Paris, 13th April, 1835.

Sir,—I leave here in two hours, and have only time to say that I have seen Mr. Canquoin, who is desirous of entering into an arrangement with you, respecting the admirable discoveries with which he has enriched medical science, as he is anxious you should make them known in London.

"The treatment of scirrhus, and what is still more common, herpes of all kinds, which are speedily cured.

"I shall be in Paris again on the 15th of May, in London on the 25th, and will then deliver to you all Mr. Canquoin's instructions and communications, he is of opinion that it will be positively necessary for you to be at least a week with him in Paris.

"With best compliments to yourself and Madame Bureaud, I remain with the highest esteem, Sir,

"Your's obediently,

"MOLLERAT."

On the 25th of May, Mr. Mollerat arrived in London, brought me Mr. Canquoin's Memoir, and strongly recommended my setting off for Paris, in order to judge the effects of the chloride of zinc on Mr. Canquoin's patients, and as an inducement, he kindly offered me a seat in his carriage, which, after some hesitation, I accepted. I imparted my plans to Mr. Ure; I told him distinctly the sole object of my journey to Paris; I offered my services to Mr. Alexander Ure, and on the 4th of June, received the following note:—

"Dear Sir,—I will trouble you to put this letter into the *Petite Poste*, when you get to Paris. Any information you can get me on surgical subjects, will be useful to me—such as inflammation, erysipelas, phlegmon, abscess, burns, tumours, stricture of urethra, venereal affection, maladies des yeux, surtout cataracte, gangrene ulceration, &c. Wishing you bon voyage,

Believe me, yours faithfully,

ALEXANDER URE.

Thursday Evening."

There is no allusion to the chloride of zinc in this note, I therefore conclude Mr. Ure had not much faith in it. I requested several of my medical friends to visit my patients during my absence, and as Mr. Ure was my neighbour, I begged he would attend to any urgent case, if he were sent for in my name. I left written instructions to this effect, and not having time to put away my papers, I desired that no one might be admitted to my library. On the morning of my departure Mr. Ure called at my house, and said he had *promised* to wait in my library every day from ten till twelve, he was immediately *admitted*, it being supposed that in my haste I had forgotten to make an exception for Mr. Alexander Ure. I spent three weeks in Paris, and was mostly with Mr. Canquoin; I saw the greatest number of his patients, and witnessed the application of the paste, but I soon discovered that the chloride of zinc was only *one of the means* employed: I made the observation to Mr. Canquoin who replied, that I was in the right, and that his treatment of cancer was a whole system, not the mere application of chloride of zinc.

On my return to London, I gave Mr. Alexander Ure some pamphlets on burns, and scalds; and to Mr. Ure his provision of the mystery for dyeing, in a manual, which he had requested me to bring him, and I hoped these several works would be a sufficient compensation for his visits *gratuitously* made for me. Mr. Alexander Ure was in my library every day for three weeks, at full liberty to study what he pleased, Mr. Canquoin's memoir was on my table, and various works on cancers on the book-shelves. The day after my return home, I told Mr. Alexander Ure the result of Mr. Canquoin's experiments, and remarked to him that the chloride of zinc could by no means be considered a panacea.

In the month of August, Mr. Lawrence favoured me with a visit, and I named the chloride of zinc to him. He kindly promised that on his return from Paris (where he was going immediately) I should treat some patients at St. Bartholomew's Hospital.

Things remained thus for two months, during which time I applied to the best chemists in London for some chloride of zinc without success. I had brought a small supply from Paris, and ordered more at Garden's and Morson's, but as these two chemists sent chloride of zinc of a different quality, I procured some from Paris, and on the 10th of October, 1835, in one of Mr. Lawrence's wards, I publicly applied chloride of zinc to an ulceration of the under lip.

I mentioned the cases published in my *Treatise on Cancer*, to Mr. Alexander Ure, who was often at St. Bartholomew's Hospital during Mr. Lawrence's visit, and saw the result of the applications of chloride of zinc I had made.

The 12th of November Mr. Lawrence wrote to me the inclosed letter, which I beg leave to forward to you.

"My dear Sir,—I am much obliged to you for the paste, and your instructions for its employment. I have applied it to-day in the case of ulcer on the temple, and will communicate the result to you.

"I wish to have the remedy tried thoroughly in the two patients at St. Bartholomew's; and therefore beg that you will employ it for both of them, in the manner you may deem most effectual.

"I have under my care a lady with a cancerous affection of the integuments of the leg. The disease presents a raised but unequal surface, between two and three inches in diameter, ulcerated, and producing a fetid discharge. It will be necessary to get rid of it, either by the knife, or by this escharotic paste: if we should determine to use the latter, can you favour me with a supply. It would be necessary to destroy to a depth of three lines; and as the extent of surface is considerable, I think that it would require at least three times as much as you sent me yesterday.

"I remain, my dear Sir,

"Your's, very truly,

"Wm. Lawrence.

"*Whitehall Place, Nov.* 12, 1835."

On the 11th of December I met Mr. Alexander Ure at St. Bartholomew's Hospital. We conversed about chloride of zinc. Mr. Ure then said he had thoughts about publishing something about it. I immediately offered him my assistance, and told him that as soon as my patient was discharged I should publish my memoir. My surprise can be well imagined, when, on the following day, I found in the Medical Gazette, "Observations and Researches on a new Method of Curing Cancer. By Alexander Ure." Not a word of Dr. Bureaud, nor of St. Bartholomew's Hospital; and these *researches* were confined to an abridged translation of Mr. Canquoin's memoir on a new *method of treating cancerous affections*, which Mr. Alexander Ure translates *new method of curing cancer*; and in this article, translated from M. Canquoin's work by Mr. Ure the following sentence will be found: "In a supplementary memoir which has been *just* forwarded to me by my kind correspondent, Dr. Donellan, of Paris." This statement is made on the 12th December 1835, viz. two months after my public application at St. Bartholomew's hospital. Therefore, to judge from Mr. Ure's own dates, he cannot claim the introduction of chloride of zinc into England, as on the 10th of October I had applied the paste, and on the 12th of December Mr. Ure had only translated a memoir. But at a later date it probably occurs to Mr. Ure, that it is essential for him to shew that he had given his attention to the chloride of zinc before I made use of it in the hospital. In your journal of the 10th of December 1836, he says, that on the 3d of August 1835, Mr. Nonat wrote to him, saying, that Mr. Sanson employed the chloride of zinc in a case of cancer of the breast, and that the result of the application did not *justify his expectations*.

It certainly appears to me somewhat strange, that Mr. Ure, who quotes so many persons, should never think of my name; and that he should refer to Mr. Nonat who is absent, while I am on the spot: but the name of *Bureaud* deprives Mr. Ure of the honour of introducing chloride of zinc into England. Mr. Ure knew the object of my journey to Paris, why not refer to this journey instead of referring to Mr. Nonat's letter, by which we are told, that Mr. Ure's attention was called to the chloride of zinc, in August 1835; but if letters be proof, I inclose you the autograph of Mr. Mollerat's letter,* dated 13th of April 1835—there agaiu I have priority.

But let us ask how Mr. Ure could pay such little attention to the unfavourable report of the academy to Mr. Nonat's letter, and to Mr. Sanson's opinions of the chloride of zinc, and what could have occurred to Mr. Ure between the 3rd of August and the 12th of December to make him suddenly find the chloride of zinc a new method of *curing* cancer. In what manner did Mr. Ure suddenly discover that Mr. Nonat was mistaken: and how could Mr. Ure have sufficient courage to try experiments on wretched sufferers when he was informed that Mr.

* See Letter of 13th April, 1835, page 519.

Sanson did not find it answer his expectation. I did not apply the paste of chloride of zinc before I had witnessed its happy effects when employed by Mr. Canquoin. It it true Mr. Ure may have dreamt he saw my patients in St. Bartholomew's hospital, but it is somewhat strange that in his daily visits he should not have heard of them, particularly at a time when his attention was directed to the subject in question: what appears still more extraordinary is, that Mr. Ure should so dexterously convert the method of treating cancer into the *method* of *curing* cancer. Mr. Ure has been sadly mistaken in supposing that Mr. Canquoin has recourse to chloride of zinc alone. Such is not the case, and it is not only imprudent and rash to try experiments with caustics, but it is highly culpable. Mr. Ure certainly did not see Mr. Canquoin's patients in Paris, for he was not there. If he did not see mine in St. Bartholomew's hospital how could he venture to apply the paste when the results of his experience might have proved so fearful. I remember Mr. Ure telling me that he employed arsenical liquor at Charing-cross hospital, and I recommended him to pay the strictest attention, as absorption was to be feared. Mr. Frederick Williams, of Pentonville, promised the fullest and most satisfactory explanations, but this promise has not been fulfilled.

Does Mr. Ure's letter of the 14th of December refute the contents of my memoir on *new treatment of cancer* by *chloride of zinc?* Was it Mr. Ure or Dr. Bureaud who went to Paris to study the action of chloride of zinc, and witness its effects? Did Mr. Ure mention the chloride of zinc to Dr. Bureaud, or did Dr. Bureaud communicate the result of his applications to Mr. Alexander Ure? Would Dr. Bureaud have left his patients to go to Paris, if Mr. Ure would have furnished him with the information he required?

It is not stated in the introduction to my work, that Mr. Alexander Ure had attended cancerous patients for me during my absence. Does Mr. Ure prove that he had any cases of cancer of his own to attend; to what then does Mr. Ure's explanation amount? They do not refute any of the facts which I bring forward. Have I ever denied that Mr. Canquoin introduced the use of chloride of zinc into France? Far be it from me to deprive any individual of his due. I have constantly named Mr. Canquoin in my work, but the question is, who introduced the chloride of zinc into England? Mr. Ure's letter of the 14th of December might certainly mislead the public. Mr. Ure is fully at liberty to talk of his independent researches, which consist in the information I imparted to him. The contents of Mr. Canquoin's memoir; the debates at the French Academy; and the application of chloride of zinc made *by me* at St. Bartholemew's Hospital. I again mention, that I first introduced the chloride of zinc in England.

On the 13th of April, 1835, I received from Paris a communication respecting the chloride of zinc. It was not Mr. Alexander Ure, but Dr. Bureaud, who, on the 5th of June left London for Paris, in order to see Mr. Canquoin's patients.

Mr. Lawrence did not confide the case of his cancerous patients to Mr. Alexander Ure, but to Dr. Bureaud.

On the 10th of October, 1835, Dr. B. applied the paste publicly in St. Bartholomew's Hospital, not Mr. Alexander Ure.

Let me now ask Mr. Frederick William, of Pentonville, whether the antidote he promised can really compensate for the displeasure I felt at losing the advantages of my journey to Paris, and seeing another individual derive the benefit of my experience, and my researches.

I freely grant to Mr. Ure all he has a right to claim: mixing chloride of zinc with sulphate of lime is due to him, although this mixture is by no means advisable for the following reasons:—

When this species of paste is applied, the sulphate, or the chloride of zinc, passes through the lime as through a sponge, and becoming a liquid, it is impossible to tell how it may act, and to limit its action.

Secondly, the lime soon becomes dry and hard, increases the patient's sufferings, and it may break, which has already been the case, and the result may be such as the practitioner does not expect, and is not prepared to meet.

Whereas, with the proper paste all is foreseen; it is not brittle but elastic, and retains the chloride during a given time. The thickness of the paste, and the duration of its application are calculated, if there be due consideration. I reject the paste made by Mr. Ure, who is still making *experiments;* and I approve of Mr. Canquoin's paste, which has, in many cases, proved successful.

Mr. Ure is undoubtedly entitled to say he first mixed chloride of zinc with lime, and thus rendered the paste (if it may be

so termed,) as hard as a stone; but I alone am entitled to claim the merit whatever it may be, of the introduction of the real escharrotic paste into England. This being the case, I think my ex-kind friend might have found means to name me before the 10th of December; and I also think, that had Mr. Ure been less precipitate in his endeavours to appear before the public, previously to my memoir coming out, he would not have written a new method of *curing* cancer; instead of a new method of *treating* cancer. In truth, we were not aware of any *old* method of curing cancer, and we must be careful not to mislead the public, or our brother practitioners respecting chloride of zinc, which is but an additional caustic, and in some cases preferable to the use of the knife in removing cancer. But to assert that this caustic *cured* cancer, would be giving proofs of ignorance or bad faith; and I also beg to observe to Mr. Alexander Ure, that neither he nor myself would have much claim to public favour, if our only title to it was the introduction of chloride of zinc; it is not the circulation of the blood by Harvey, nor adhesion by Hunter, nor vaccination by Jenner, it is only a useful caustic if judiciously employed.

For these explanations which may not prove very satisfactory to Mr. Ure, he is indebted to his friend Mr. Williams, of Pentonville, but for whose interference I should have persevered in shewing the same forbearance as in 1835.

I am Sir,

Your obedient servant,

BUREAUD RIOFREY.

HOMŒOPATHY EXAMINED; OR, HOMŒOPATHY IN THEORY, ALLOPATHY IN PRACTICE. BY ROBERT VERITY, M. D., MEMBER OF THE UNIVERSITIES OF EDINBURGH AND GOTTINGEN.

There is implanted in the human constitution a tenacious faith in personal experience, and in all impressions made through the immediate perception of the mind. Accordingly we find that, after a very few individual instances of a principle ostensibly illustrated, the irreflective majority of mankind instinctively infer a similar result will ensue, if something happen next to present itself before them, wearing on its face an apparent, and but an apparent, combination of analogous conditions. They do not much trouble their heads about the indispensable *cæteris paribus*. But the points of difference and of disaccordance between individual instances multiply in the direct ratio of a principle's pretensions to universality of application (ex. gr., the homœopathic). These divergencies, however, escape the discriminate apprehension of the great many, who are attracted more by qualities directly similar and analogous which lie, as it were, on the surface of things, than by qualities dissimilar and militant, which have a more occult dwelling-place, and penetrate far deeper into the relations of the intellectual world. But it is essential for the testing of truth, that our perception of discrepancy do not destroy our perception of analogy; for, although by the latter we are led to a direct and first recognition of the most obvious aspect of what is true, it is by the former, we have provision naturally made within us for the detection of the many forms of error, and for the disrout of sophistry. Pure and stable truth consists in the harmony of both these mental perceptions balanced upon the golden central point—the conscientious principle—which in alliance with the intellectual demonstration, and feeling the plenitude of moral conviction, forges the riveting band round the last link of the chain.

It must be confessed, the homœopathic theory does not bear the trial of such a mode of philosophic investigation. As far as its fundamental proposition is concerned, it must be considered but a superficial and empirical interpretation of a class of effects in the practice of medicine, well-known to the English and German schools, and admitting of satisfactory explanation from the principle of *alterative* action. Under the vicious presumption that the medicinal changes effected by the alterative agents are identical with aberrations of function, in other words, disease—because taking place in the same part of the system and on the same field, the followers of this new doctrine have mis-denominated homœopathic action, what in fact is very nearly the opposite (alterative). Under a semblance of identity they did perceive this incongruity. But, as in all departures from the expression of truth and reason, some secondary bungling means must usually be superadded to bolster up the original error, we find, in this instance, the homœopathic authors have been obliged to concoct the additional absurdity, that medicines exercise sanative agency in the inverse ratio of their

subdivision, "rarefacted" (to use their own word, even to infinitesimality.

As in the course of these few pages a more detailed exposition will be given of whatever is false in the theory, or true in the practice of homœopathy; and, also, of whatever may be considered mischievous or worthy of praise; these prefatory words cannot, perhaps, be more happily concluded than by signalizing to notice a class of minds, which, enslaved by a psychological habit, prefer the unknown to the known; the thing occult to the thing demonstrated; and that which is remote and unattainable, to that which is near and possible; and who, too, delight to gratify their tastes and cravings for the marvellous and to lose themselves, equally well in the thaumaturgy and nervous manipulations of animal magnetism, as in the achievements of its kindred pretender, homœopathy.

Here, no doubt, amongst such persons, as formerly in the country of its birth, will this wonder and novelty have its day, and resound for a while, but the force of science, and of reason, accumulated through centuries of time, will at last vindicate its prerogative, and, like the transforming touch of the angel's spear, compel whatever is false and disguised to take its own shape and colour, that it may be recognized, shunned, and forgotten.

Homœopathy Examined.

THE HOMŒOPATHIC PROPOSITIONS.

After the manner of the old method of philosophizing—first conceiving certain hypothetical propositions, and then bringing all seemingly related and analogous instances to undergo the yoke of constrained application — homœopathy has been ushered into the world by an enunciation of some preliminary positions, upon the tenability of which its whole existence as a system essentially depends. And certainly from these it is with no great difficulty dislodged. For we meet with, on the very threshold of inquiry, such a palpable assumption of more than questionable premises, that the ill-based superstructure of its theory will be found to start irresistingly away under the pointed touch of the differential analysis and the force of inductive knowledge. A few classes of facts, however, indubitably true and substantiated, and which have hitherto, from sheer ignorance, been claimed as exclusively its own, will always remain; but will receive a fuller and more natural solution when restored to their proper place, under principles from which they have been so unnecessarily disjoined.

The first fundamental proposition whence homœopathy derives its name, and to which the others are appended as convenient corollaries—*similia similibus curantur*—requires only a fair exposition to be refuted as paradoxical and logically absurd. For, if similar qualities of action be added to each other, there must consequentially ensue aggravation, and not annihilation of disease. But if the qualities be different, then is the proposition destroyed and converted into the *alterative* principle. The sophism demands a Latin form for concealment.

The next proposition, that different qualities of action cannot take place at the same time, in the same tissue, or in the same system of the economy, is equally gratuitous and falsely assumed, as the preceding, and contradicted most positively by the daily experience of every physician. But it was necessary to be postulated for, in order to exclude what would have fatally antagonised the application of the homœopathic proposition. For it is a well-known pathological law prevailing throughout the human system, and continually exerting its influence, that there can obtain at the same time, and in the same parts of the body, an interaction of different causative agencies one upon the other (whether coming from within or from without), having the effect of producing modification of function, and by disturbing abnormal states, of leading to the reaction of health. But there is a total exclusion of this principle in the homœopathic theory.

The practice of homœopathy in the exhibition of infinitesimal doses (the last link of the theory), is so thoroughly a deduction from the preceding assumptions, that this rarefacted absurdity may safely be consigned, without any further notice, to share the fate of their condemnation.

Such is the nature and value of these fundamental homœopathic principles, which, encased in a kind of syllogistic dependance upon each other, converge to a result by bringing forth a pseudo-medical practice, in whose composition it would be difficult to determine, whether ignorance or pretension bore the greatest proportion.

IGNORANCE OF THE HOMŒOPATHISTS.

It might, indeed, have been naturally pre-supposed, that propositions such as we have just been considering, so offensive to reason and common sense, and so formidable in the extent of their pretensions, could have been never broached and afterwards seriously maintained by any the least acquainted with the theory of therapeutic agency, as grounded upon a knowledge of the chief physiological and pathological laws of the human system. And, in fact, this presumption is fully justified after a scrupulous reading of the best homœopathic authorities. Such culpable unconsciousness, on their part, of existing knowledge, gives us at once an explanatory key to the peculiar form of their assumed positions. For it is the most common error of the mind, in a state of relative ignorance, to misapprehend the whole circle of truth, and to attach a false and limited interpretation to the phenomena which it contemplates. How much more then must this be the case, when these are the intertangled actions and discoloured hues of disease! Accordingly, there is ample evidence, both of a positive and negative kind, to accuse them of most deplorable ignorance of the modern practice of medicine, of which there does not appear a fragment throughout their publications, either by way of exposition or suggestively, without being ridiculously mistated and tortured from its true bearing. But this is not all,—they will be found to have, with apparent wilfulness of partiality, adduced as sufficient and conclusive illustrations of some of their own crude notions, an array of obscure and unauthenticated statements, wantonly evoked for this profane purpose once more to the light of day, from their otherwise eternal burial-places in the old archives of medicine, of all countries, and of all schools, indiscriminately. With the liberty of adducing *such* authorities, there would be no conceit of the imagination that might not be verified in illustration. It must be confessed, that they have done this part of their task with unwearied German industry and research.

There remains still another accusation the homœopathic writers—of disingenuousness, or of ignorance (it is difficult to decide which), in bringing forward many of the obsolete or most reprobated errors and abuses of medicine, and charging them, sometimes directly, at other times, by implication, as a true expression of the modern practice. These have they marshalled out ostentatiously and placed in juxta-position with their own system, and then with admirable impudence and complacency, they sound the trumpet, and challenge the world to decide on which side remains the superiority. The truth is, this new doctrine has arisen from ignorance and misapprehension of medical science—not at all from a conviction of its falsity; and the endeavour of its followers seems to consist rather in establishing their own theory than in refuting the principles in whose place they pretend it to be substituted.

FACTS OF HOMŒOPATHY.

Having thus exposed the absurdity and logical inconsequence of the homœopathic notion, and its being an idle and supposititious means only of explaining so exclusively the varied complications of diseased phenomena, and the multiplied relations which exist between therapeutic agency and the common laws of the human physical constitution, here, for the completion of our argument, might we stop. But a number of well-established facts remain, which have been, under error, triumphantly adduced as corroborations of the truth of the theory. These, however, can be much better referred, as has been mentioned before, to the well-known physiological and pathological laws which obtain in the human system. It is not so much the few facts themselves as the false principle by which they are explained, that is the true subject of controversy.

(To be continued.)

REVIEW.

Guy's Hospital Reports, No. III., September, 1836. Edited by George H. Barlow, M. A. &c., and James P. Babington, M. A. &c. S. Highley.

The present number of the valuable reports before us, contain some very interesting essays from the medical staff of Guy's Hospital. We placed one of the papers, by Sir Astley Cooper, in our last, and shall now conclude it, and place some other contributions before our *readers.* See p. 501.

Books and Communications for Review to be addressed (post paid) to Dr. Ryan, 8, Argyll-place, Regent-street; or to E. Cox, Medical Bookseller, St. Thomas-street, Borough.

THE

London Medical and Surgical Journal.

No. XVIII. SATURDAY, DECEMBER 31. Vol. II.—(1836.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

No. III.

Irritability [*continued.*]

Indirect Stimuli to Irritability, continued.—Stimulus of Volition —Seat of the primary Irritation thus excited.—Conveyed by the Motific System of Nerves.—Changes in the degree of Irritability of certain organs.—Periodical Irritations —Duration of Irritability. — Death. — Enumeration and Arrangement of the Functions of the Body.—Functions requiring Irritability alone; and those which require other superadded properties.—Respiration.—Respiratory Apparatus of Plants, and of Invertebral Animals (as consisting of the External Surface alone, of Gills, of Bladders, or of Tubes) of Fishes, Reptiles, Birds, and the Mammalia in general, and the Fœtuses of each

3. *Volition.* The connection of the respiratory nerves with filaments from the motific columns of the spinal cord, is presumed by Bell, and proved by Bellingeri. Hence the power of volition over the muscles of the face, voice, &c. is not wonderful. None of the systems of nerves should be regarded as exclusive; because there is an intimate mixture with filaments from other systems. Hence we explain the sensibility of the intestines in gripe; filaments from the sensific nerves being interwoven with the ganglionic.

The way however in which the nerves convey stimuli is not known. It is one thing to prove the road; but another to shew how the influence travels along it. The principal theories are the "fluid," and the "vibratory." But in opposition to the first it may be remarked, that the nervous tissue apparently is not pervious; for under the microscope, it appears to be made up of filaments, composed of globules. If the pulp be dissolved, the neurilema is found to be tubular; but the pulp itself is almost impervious; as from its globular structure, it must be. One anatomist thought he had proved the nerves to be pervious, by injecting them with quicksilver; but he only injected the neurilema, as was proved by Arcrussat. Against the "vibratory," theory it may be urged, that the nerves have not the hardness, the compact structure, or the freedom from contact, which are necessary to vibration. Not only are the nerves tortuous in their course; but their component filaments are tortuous in their arrangement. But the objection to both theories is, that they are too gross. They presume on an analogy where none is likely to exist. A change produced on one part, may be understood to cause a change in another part, propagation giving it a power to act as a stimulus. But this change is probably *sui generis;* and, like all vital functions, is not to be explained by any action out of the body.

The will acts differently from other stimuli; but it excites an irritation in some part; which irritation becomes a stimulus to the voluntary muscles. The seat of this irritation, indirectly effected by the will, seems to be in the anterior columns of the spinal cord. That the brain, or the will, is not the immediate stimulus, is proved by the fact that these muscles often act independently of the will; and the motion of the lower limbs is not affected in some cases, in which the spinal cord is wholly separated from the brain. Bell deprived a rabbit of sensibility; exposed the spinal cord; and on touching the anterior roots of the spinal nerves, the muscles to which they were distributed were convulsed; proving the immediate seat of the stimulus to be in the anterior column of the spinal cord; and not like that of the will, in

the brain. Some, however, have repeated these experiments without the same results.

Wherever, in the nervous system, we find grey matter, it seems to prove that a stimulus is *generated*, and not merely *conveyed* by it; and if the motific column only *conveyed* a stimulus, it would probably have been destitute of grey matter, as in the respiratory column. In all parts of the nervous system, the white portion probably performs only the office of ducts. Gall and Spurzheim say, that the grey matter in the brain is a matrix for the white; but Tiedemann shews that the latter is first formed. The formation of the tubular part of the glands always precedes that of the parenchyma. Hence Tiedemann's observations are in favour of the analogy between the brain and the glands.

It is a curious fact, that if we divide the *spinal-accessory* nerve, respiration and emotion do not raise the shoulders; but we can effect their elevation by the will. But if paralysis of that part occurs, the power of the will over the shoulders is lost; but they are raised by respiration and emotion; proving that different functions are performed by different nerves.

"Accumulation of *irritability*," is, perhaps, an incorrect expression; but probably the stimulus becomes accumulated; and it is probably by its exhaustion, that fatigue results after labour. Two conditions are necessary for every motion in any part of the body; susceptibility and a stimulus. Hence a few grains of food applied to the salivary organs will excite them; but bushels will not, if applied to parts not adapted to that kind of stimulus. Hunger appears to arise from an increased action of the fibres of the stomach; in fact, from a slight degree of spasm. The secretion of semen, of milk, and of the menses, is from increased action; but there must have been diminished action previously; and the same observation applies to fever, inflammation, and hæmorrhage.

In some cases power is said to have been exercised over the heart and other involuntary organs. This may probably have been owing to a few fibres of the motific nerves going to these organs, in connection with other nerves; but power over them often depends on emotion.

By death we may understand the cessation of the bodily functions; but the *aptitude à vivre*, or irritability, may remain after it. Cases are on record of animation being suspended even for years. It is a question how long after asphyxia irritability remains. Currie says it continued in a man after eight minutes' submersion, and after his being neglected for twenty minutes more. Bergman says a man was under water for seven weeks, but recovered. Perhaps this is going too far; but it is hardly less credible than well-attested stories of recovery after being given up for dissection, or being buried. But in the case of the human subject the limit is very short, compared with other animals. The most remarkable, in this respect, are some animalculæ; especially the *verticelli*. They are often dried for years into points resembling particles of sand, and may be shivered with a needle; but they revive on a drop of water being applied. The vitality of the animalculæ (resembling eels) which infest blighted corn, is very great. They have been known to survive after twenty years of apparent death. In all these cases irritability may be destroyed at once by electricity. With respect to plants, the *tremella* may be shrivelled into invisible points; but springs into verdure on being exposed to water. The irritability of seeds under ground is known to be retained for a great number of years.

The first part of the body to lose its irritability, is the left ventricle; which refuses to act on the strongest stimulus. This takes place about half an hour after apparent deaths. This is the *primum moriens*, and the right auricle is the *ultimum moriens*. The auricles appear to be more abundantly supplied with ganglionic nerves than the ventricles. The following is the order in which the different parts of the body lose their irritability:—1. The left ventricle. 2. The large intestines. 3. The small intestines. 4. The urinary bladder. 5. The right ventricle. 6. The voluntary muscles. 7. The gullet. 8. The left auricle. 9. The right auricle.

By a temperature much above 80°, or below 30°, putrefaction is prevented; in the first by evaporation, in the last by congelation. But a similar immunity is enjoyed by some, without any assignable cause. Tullia, the daughter of Cicero, was found fresh, after having been interred for fifteen centuries; and the same with Lactantius, after an interment of eight hundred years. A similar instance is said still to exist in London, in which the body is looked at every year, and is still found to be fresh.

FUNCTIONS OF THE BODY.

A *function* is the proper action of a living organ, or set of organs, conducive to particular ends. It differs from a *property* (such as *sensibility*, for instance); and from a *power* (or *stimulus*); and consists of a property and a power in action together. Those terms which end in *ity*, designate *properties*; while those ending in *tion*, mean *powers*. Every organ has its appropriate *action*; and that is its *function*. The functions of the body, however, are named according to the end arrived at; for it would be impossible to enumerate as many functions as there are *organs*. Respiration, for instance, is made of the elevation of the ribs by the muscles; of the expansion of the lungs, &c.; so that under the head of the function which we call *respiration*, we include all the actions of the chest and its contents, subservient to the change of venous into arterial blood.

Some functions cannot be suspended without death; while others may be interrupted for an indefinite period. Aristotle's classification was founded on this difference. It is threefold, and was most commonly adopted, even down to the time of Gregory's "Conspectus." 1. *Vital Functions*—Respiration and circulation. 2. *Natural Functions*—Secretion, absorption, digestion, and generation. 3. *Animal Functions*—Sensation, thought, and voluntary motion. Of late years the French have divided the functions into *nutritive*, *sexual*, and *relative*. All these arrangements are defective, owing to the functions sliding into each other. We shall, for the same reason, omit those of Cuvier, Vicq d'Agyr, and others. I think the simplest plan is to divide the functions into, *first*, those which depend on irritability alone; and, *secondly*, those which require other qualities to be superadded; subdividing the latter into *sensation*, which is perhaps built on *irritation*; *thought*, which is perhaps built on *sensation*; and *voluntary motion*, depending on the previous exercise of *thought*.

RESPIRATION.

The simplest form of respiration is in plants. The leaves are lungs turned inside out; the cells being opened out for the air to flow over them. But leaves are not so analogous to lungs as to a respirating skin, having the respiratory organs within. Many plants have a thin and transparent *epidermis*, which lines the respiratory cells in the leaves. Below this *epidermis* is the true *cutis*, which is a net work; and pores lead to the respiratory cells, which were first described by Grew. These cells exist on both sides of herbaceous plants; on the upper side of those leaves which rest on the water, and on the under surface of the leaves of trees and shrubs. The leaves of plants which grow under water have none at all. On one square inch, a hundred and seventy-two thousand of these cells have been counted. From their minuteness it is difficult to say whether they open and shut; but it is proved that air enters them, by its being found only in those leaves which are exposed to air, and most abundantly in thin leaves which wave in the air. Cellular tissue makes up the greatest portion of all parts of the plant. If the epidermis, the cutis, and the parenchyma of the leaves, be removed, the vessels remain; and may be considered as the pulmonary arteries and veins. Whenever the leaves are absent or inert, their functions are performed by the trunk.

In Zoophytes, no glasses have yet discovered any apparatus for respiration; though they are proved to respire by the change which takes place in air in contact with their bodies. But in the *hydra* (or polypus), the *circularia* (commonly looked upon as *sea-weed*) and the *asteria*, the arms which are put forth, are probably of the nature of leaves. No pores, however, have been found upon them. Gills very much resemble leaves; being cylinders, or fringes, on the surface of which the water plays. The first appearance of a receptacle for air is in the form of little bladders, in different parts of the body. These are found in many of the *invertebrata*; and the lungs of reptiles are only a collection of such bladders. The most perfect respiratory apparatus consists of a collection of tubes, communicating externally, as in birds and the *mammalia*. In some animals the tubes are so expanded into bladders at different places, that it is difficult to say to which class they belong.

The fresh water muscle has gills both internally and externally. The *glaucus* has four sets of gills on the surface of the body, but no opercula. The *aplygia* and cray fish are examples of the same arrangement. It is in the cray fish that the first rudiment of a chest appears; there being a cartilaginous septum between the gills and the other viscera, which septum is moved by little muscles.

The snail has an opening near the

anus, leading to a bladder. Snails which live in the water have gills. The *medusa aurita* breathes, not by gills, but by bladders; and the latter exist in a perfect form in the bee. In grubs the bladders are of a tubular form. The *sœpia octopodia* is generally thought to have gills and bladders too; but what appears to be the latter, is only a part of the muscular cloak-bag of the animal, regulating the admission of the air, and thus performing the office of a chest.

The *hirudo medicinalis* has thirty-two pulmonary vescicles, which do not communicate with each other, but which open by *stigmata* on the surface. From the peculiarity of its circulating system, it can live for a long while in oil, or *in vacuo*, without injury. The silk-worm has two vessels which run along the sides of its body, and which open by *stigmata*, expanding and contracting at pleasure, by means of tranverse fibres. Most of the *scarabœi* have *stigmata* furnished with a kind of *opercula*. Those insects which dive under water carry with them a quantity of air entangled among the hairs of their body, and they are defended from the water by oil. Some, however, have long processes near the anus; which processes are constantly above the surface of the water, being a a kind of *cetacea* in this respect. Among these animals *expiration* is more cared for than *inspiration*. The motion of the awns which cover the wings of insects often assist respiration; but a regular cloak-bag is the nearest approach to a thorax. It ministers, however, to *expiration* alone; *inspiration* being only the result of its relaxation.

Most fishes have four gills, which are kept in motion by muscles, aud are attached to the thoracic ribs. The water reaches them through the mouth, by my means of five openings in the pharynx. The food is prevented from passing through these openings by means of papillæ. The surface of these respiratory fringes is computed by Monro, to be equal to that of the internal surface of the human lungs, or, in a fish the size of a skate, above four hundred feet. By others, the extent of surface is computed, with great probability, at a thousand feet. Of all animals, fishes have the most extensive respiratory surface. The *rays* and *sharks*, however, breathe by bladders; and the *lampreys* and *mixines* by tubes. The two first receive the water through the mouth, and it is then squeezed out again through five narrow slits. In the lamprey, the water is squeezed out through holes opening on the surface of the body; in the mixine, it passes into the gullet. The swimming bladder of fishes is perhaps a respiratory organ. It may be a rough model of the membranous lungs of reptiles; but it is more connected with the intestines than with the gills, and will be described hereafter.

Reptiles breathe by a kind of lungs, which, however, are membranous, and not parenchymatous, the cells being so large, that the organ looks like a membrane, and not fleshy. These lungs, or bladders, are loose and floating among the viscera of the abdomen, for reptiles have no diaphragm. These animals do not receive air by expanding the chest, and making a vacuum, but by swallowing, being, in this respect, analogous to fishes. We speak now of frogs and tortoises. They have no ribs; and if we open the chest, or general cavity of the body, they can still continue to breathe. In frogs the muscles of the lower jaw, (which are, in fact, the muscles of inspiration), are very large. In these *membranous* lungs, the air is not vitiated so soon as in *parenchymatous* lungs, for the large size of the cells does not permit the air so soon to come into contact with the vitiating medium. Serpents have only one lung—the right, but there is a blind depression on the left side of the trachea, which may perhaps be regarded as the rudiments of another lung. From the snail up to man, there is a tendency of the lungs and liver to the *right* side, and of the heart and stomach to the left, The ribs are very numerous, being analogous to organs of locomotion. Some reptiles can bring the top of the trachea nearly to the symphisis of the jaw, so that they can breathe with only a small part of the head above water. Some lizards fly by means of the ribs. Some animals are intermediate between a fish and a reptile. We may perhaps call it a fish with an air-bladder more developed than usual. The gills of the tadpole are attached to the thorax.

Birds have true tubular lungs, in this respect resembling insects, but having then a more concentrated form. All the viscera of birds may be said to be within the lungs, the latter being connected with cavities in the bones, and with air-cells which surround the viscera. It will thus be seen, that they have a more extensive respiratory apparatus than any other animals. The general diffusion of this

vitiated air, is useless so far as respiration is concerned, but is designed to give lightness to the body. The trachea and bronchia of birds are furnished with rings like those of reptiles, but they are generally ossified. The trachea is much convoluted at the sternum, especially in the males of aquatic birds, which, from being thus furnished with a reservoir of air, are able to remain a long time under water. In birds, and in some lizards, the false ribs are *above* the true ones, and not *below* them. They have no cartilages, but are supplied by a ginglymous joint. By lessening the angles of the ribs, the sternum is pushed forward; and the expansion of the lungs is also assisted by muscles, which, in some measure, perform the office of a diaphram, but there is no *proper* diaphragm. The lungs can scarcely be said to be expanded by respiration, but the cells beyond them are expanded, and thus the air is made to rush through the lungs.

In the egg, the mesenteric vessels are conveyed along the alantoid to the *vesicula æris*, which is a cavity caused by the partial separation of the membrane which lines the interior of the shell. The alantoid is the *fœtal* part of the placenta, and the *vesicula æris* is analogous to the *maternal* part, Hence, there is a strict analogy between the fœtuses of *oviparous* and of *viviparous* animals; nay, we might carry the analogy almost as low down as seeds.

The lungs, in some animals, have no division into lobes. In some, as the hare, the reputed vesicular structure of the lungs is very remarkable. In the dugong, the trachea is of a spinal form. The rings of the trachea are generally imperfect in the *mammalia*, and their number varies from seventeen (as in the mouse), to seventy-eight (as in the seal). These rings are ossified in whales; and in them the diaphragm is so oblique, that the lungs lie rather *behind* than *above* it. The ribs in the *mammalia* vary from twelve to twenty-five on each side.

The fœtuses of the *mammalia* breathe by tufts, or by cotyledons, or by a fœtal placenta. An arrangement of the first kind is seen in the horse, and of the second in the cow, the cotyledons in the latter, fitting into the *glandulæ* of the maternal placenta. These cotyledons and *glandulæ* differ from the human placenta only in their all being distinct in patches, instead of being amalgamated into a uniform cake. In the *feræ*, the fœtus is surrounded by a circular belt like placenta.

Errata.—Page 462, column 1, line 29, for "red-haired *eunuch*," read "red-haired *wench*."

Page 463, col. 1, line 27, for "*in*elasticity," read "elasticity."

Page 464, col. 2, line 11 from the bottom, for "*hydalis*," read "*hydatis*."

Page 464, col. 2, line 9 from the bottom, for "*nuja*," read "*mya*."

Page 465, col. 1, line 25, for "*any* gullet," read "*our* gullet."

VERITY, ON HOMŒOPATHY.

(Continued from page 524.)

The ingenious sophistry with which they have been violently displaced from their right principle, and afterwards serried together in all hues and colours, as homogeneous evidence of the empirical proposition upon which the homœopathic theory is founded can only be thoroughly detected in all its involuted bearings by a mind enlightened by philosophic and medical knowledge. The majority of cases successfully treated by the homœopathic disciples will be found amenable to the following conditions, either severally or conjointly, which, indeed, may be regarded as the least objectionable points of their practice, and which alone acknowledge a rational principle of causation. But be it most emphatically remarked, they have no kind of relationship or dependance whatever upon the theory of homœopathy. These conditions consist in, an immunity from disturbing causes by avoiding excess of interference; a calculated hygienic regimen in all its branches; the exhibition of minute doses of the most powerful of the narcotic poisons; or of the class of remedial agents having an *alterative* action upon the system.

The class of persons most peculiarly influenced by such a combination of curative means, are those endowed with a delicate and highly excitable nervous system, whose organization, innately, or from subsequent efficient causes, has been rendered eminently susceptible to all impressions, whether coming from without, or generated within the internal structures of the body. In such individuals the nervous actions have become disproportionate to those of the other tissues of the frame. They bear too energetically upon the organic material, and cruelly wear it out. Compared with the heavy physical nutrition of former

times, it is, indeed, a remarkable feature of the present generation, that the physiological state of all classes of society has been insensibly exalted into the finer and more nervous qualities of organic temperament from the prodigiously increased activity caused by earlier, more varied, more systematic education; by a much more extended sphere of moral and intellectual pursuits; and, not least, by the fevered and mischievous excitement attendant upon the habits of social and political life: so that there is never time given to gather up for a while the reins of unintermittent action, and look out, in repose and at a distance, upon the scene and movement of external things. This forced and habitual activity terminates at last in a predominant organic development of the nervous system. The primitive tissue of the individual undergoes a modification of quality, and he must be regarded, both medically, and otherwise, in all respects, in relation to the altered type of temperament. Such has been the inward change gradually coming on in the physiological state of modern society, and this more markedly amongst the upper classes, where will be found the preponderating number of those anomalous affections, both acute and chronic, benefited by the controlling agency of sedative means, in combination with rational habits, and enlightened hygienic treatment calculated to develop more favourably the antagonizing nutritive action of the system. This therapeutic principle, in relation to quality of temperament, has long ago been embodied into practice by the best modern physicians. It is, after all, but a fractional part of the general domain of medine from which it has been separated, and presented under a hard and imposing name as something marvellously new, by the many-sided ignorance of the homœopathic authors. But, as in all narrow and garbled conceptions of principles, it has been carried out by these last far beyond its legitimate sphere of action, and applied, with unbending Egyptian exclusiveness, to cases where the indispensable conditions, lately described, did not obtain. As might have been expected, experience on an extensive scale soon negatived such an indiscriminate mode of procedure. And, accordingly, we find all its trials have singularly failed, although conducted with care, with ability, and under the guarantee of public inspection, when made in the hospitals of Germany, of Naples, and of Paris independently of the numerous experiments of individuals, where the cases treated presented a fair proportion of diseases arising from aberrations of the vascular and functional action of the different organs of the body. This trial upon the unselected cases of disease in general was the true touch-stone of the pretensions of the homœopathic theory. It was attempted, and it failed. So that, like the empiric with one solitary notion, the blind homœopathic continues daringly to apply his, as the sole universal law over the whole dominion of human pathology, and does not disdain religiously to believe, that even the absorption of morbid structures and depositions, no less than the cicatrization of gaping wounds, will remain uninfluenced by the occult sanative virtue locked up in the millionth part of a grain of some plant of the field; to be more marvellous, certainly, in its energy than any alchemistic transmutation since the good old time of Raymond Lully.

IRRELATIVENESS OF THE THEORY OF HOMŒOPATHY TO ITS FACTS.

Thus far have we noticed a character of facts, incident to the practice, but foreign to the theory of homœopathy; which last being, as already mentioned), but another name for the principle we are now about to consider, ingeniously disguised, however, from immediate recognition by the close investment of the infinitesimal-dose absurdity. But to pursue our argument. Every philosophic physician considers disease (some do) not as a substantial entity, with a dress and qualities inherent to itself, residing, under a character of individuality, as an enemy in the interior of the organization, but as an aberration of some function or functions of the system, the laws of whose actions he studies in the principles of physiology and pathology. It is upon these functions, not upon the nosological creation—disease—that he brings his sanative agents to bear. Each class of these, according to its distinctive virtues, is found severally to modify the quality of action, peculiar to the different organs of the body. The homœopathic originators have ignorantly mistaken this modified quality of action, effected by the different classes of remedial agents upon the glands, surfaces and tissues of the body, for something identical with the diseased action. Because a certain effect is discovered to be

produced by a remedial agent in the same locality where deranged action is going on, misled by this one circumstance of resemblance, and blind to the many others of difference, they assume the identity of the two, and cry out bravely "similia similibus curantur." This, however, physicians have been accustomed to call the alterative action of medicines, for the simple reason, that their sensible agency upon the implicated organ, by *altering* its action, gives opportunity for the natural state of function to re-integrate itself, and by that means to work out the return to health. But the homœopathists, not having penetrated deeply enough to arrive at such a *rationale*, absurdly say (when their words are interpreted to an honest equivalent), identity of locality, identity of action. Here the incongruity is glaring. Give then, on the other hand, their own words, and the reasoning, (as shewn in the beginning of the argument) if pursued consequentially, would elicit nothing less than there ought to ensue aggravation, and not extinction of, diseased action.

These few pages having been written more for an exposition of the theory, than for a statement of the parasitic details, of homœopathy, our task is now done. Nor is it from forgetfulness that mention has been made of the preposterous psoric hypothesis—the Serbonian bog of the homœopathic professors—in which are conveniently disposed of, and buried, some fathoms deep, the many legions of disease intractable and rebellious to the authority of their system. To conclude, it can be well-repeated, they have purchased their fame at a cheap rate, in first disguising (unconsciously perhaps) an ancient principle of medicine by a misnomer, and then, under its sophisticated garb, claiming it as the most wonderful discovery of modern times.

CONCLUSIONS.

I. That the fundamental propositions of the the homœopathic theory are absurd and illogical.

II. That there has been evinced, on the part of the homœopathic originators, a gross ignorance of the modern practice of physic.

III. That the practice of homœopathy is not in accordance with its theory, but allopathic the rarefacted-dosing principle excepted.

IV. That the evidence of the homœopathic theory resolve themselves into those of the alterative principle of modern physicians.

V. That the loss of time under nugatory homœopathic treatment, in the severer inflamatory affections, would frequently be attended with loss of life, or destruction of organization, and in the more chronic, with irrecoverable alteration of structure.

VI. That the long-continued exhibition (homœopathically) of the most powerful of the narcotic poisons, in weakly organized individuals, would produce, by insensible degrees, læsions of innervation of an alarming kind, and carry such detriment to the nervous system as would often insidiously, but not less fatally, undermine the integrity of their constitution.

NEWS FROM DUBLIN.

When the present government came into office, the event was hailed with joy and thankfulness by every sincere advocate of reform, by every one that valued improvement, every one that loved his country, and wished to see her institutions purified in some measure, (if the whole were not practicable), from the accumulated corruptions of many generations:—never did a government more fully enjoy the confidence of a country, or possess a wider, or a fairer field to confer substantial benefit upon, and secure to itself a permanent influence in the kingdom. This it would undoubtedly have effected, had it boldly and with sincerity based itself on principle, without regard to contending parties, the baseness of whose motives was well known. Instead, however, of pursuing this course, which was at once just and magnanimous, and even its wisest policy, it preferred an unsteady, a weak, and wavering career, vainly endeavouring to strike between hostile factions a doubtful and difficult balance. The consequence has been what might have been anticipated; the confidence of the country is shaken. The milk and water reformers, with the alarmists, already look to the tories, while among the genuine reformers, which class includes the sound sense and good feeling of the entire country, the conviction daily gains strength, that if they are to have any thing like substantial reform, they must expect it from a government

possessing a much stronger infusion of *democratic vigour*.

Opinions such as these are general topics, which are daily spreading throughout the country, seem to extend likewise among the profession as regards the all important question of medical reform;—and with the same degree of justice, it must be confessed. The medical public has long been kept upon the tiptoe of painful expectation:—a thorough, deep, and searching reform bill has long been promised, one that will annihilate monopoly, and provide a complete remedy against the innumerable inconsistencies and anomalies, which at once ruin the profession, disgrace the statute book, and grossly injure the public. This, though not to emanate directly from the government, has been long and loudly trumpeted as possessing the entire and hearty concurrence of ministers. What, however, has been the result of years of promise and expectation? "echo answers," one little statute: little, certainly, compared to the host of medical subjects, that loudly demand legislation, but in itself, we are free to confess, most useful and important. Even this however did not emanate from the government, and most probably would still remain a lignum inutile, were it not for the exertions of a professional member of parliament.

In Ireland the cause of medical reform is still less indebted to his majesty's ministers: there, there is not even a coroner's bill to palliate the sickness of hope deferred: nay, legislation, though in this instance emanating directly from the most confidential attachè of the government, goes in the very teeth of reform: to this astounding fact, we confine observations, at least for the present, though the medical *appointments* of the government in Ireland, may likewise afford a subject not unworthy of animadversion. The Irish grand jury bill amongst many other things, enacts regulations as to the elections of medical officers to county infirmaries, it being notorious that the mode hitherto adopted was open to many serious objections, the most glaring and offensive of which were, *purchase, and jobbing patronage*. Strange to say, however, the bill excepts from its wholesome enactments, the County Dublin Infirmary or Meath Hospital, for what substantial reason it is impossible to conceive, unless, indeed, it be for the truly whig suicidal object of exhibiting before an indignant public, under the very nose of government, a yet more gross and corrupt job, than ever adorned the palmy days of the most rampant toryism, perpetrated by two officers of a reform government;—viz., the surgeon General Crampton, a prime favourite of the Irish court, and Mr. Cusack Roney, a paid subfunctionary in the reform department of the poor laws, a department, be it remembered, which also comprehends the reform of the Irish dispensary system, a subject the investigation of which (with a view to correct its abuses) has already cost the government a vast deal of money, in part at the hands of Mr. Cusack Roney aforesaid, who is likewise reported to have received yet more recently, further marks of government patronage and confidence.

The contract existing between the medical and lay governors of the Meath Hospital has long been notorious, the former giving up to the infirmary the miserable pittance of their county salary, and receiving in return the far more substantial patronage of appointing, either by election or sale, as the case may be, the medical officers to the institution. We must confess the medical officers have by far the best of this bargain, when we reflect that each of them for the surrender of the paltry sum of the seventh part of £92 6s. 8d., enjoys the reputation of active and *disinterested* charity, a reputation by no means to be despised in Dublin; when we call to mind the certain avenue to extensive practice, that appointment to a large hospital necessarily affords; when we calculate how many apprentice fees it will undoubtedly accumulate; and when we consider how snugly it permits an opportunity of slyly turning a couple of thousand pounds when the proper season offers; not to say a word about the pleasures of power and patronage necessarily connected with such an appointment:—It is not always thus that the medical profession secures its own interests in contracts with the public.

There are seven medical officers attached to the Meath Hospital or County Dublin Infirmary; viz., five surgeons and two physicians. Hitherto, the surgeon general, Mr. Crampton, has been almost the sole patron, having nominated and appointed no less than four surgeons in succession, his own apprentices or relatives of course. One of his nominees having lately died in office, several persons thought that a favourable opportunity offered, to open the borough, or

at least to withdraw the hospital from the breeches pocket of Mr. Crampton. The physicians being only two in number, had hitherto been complete cyphers in these proceedings, and being naturally desirous of possessing some power, they felt strongly inclined to disobey orders from head quarters: besides, to give a character for liberality these times, in an innocent way, could do no one any harm: perhaps, too, they wished to strengthen the surgical department of the hospital, which had been greatly deteriorated as a school, by Mr. Crampton's being utterly regardless of talent or fitness in his appointments, being hitherto swayed only by nepotism or personal partiality, the latter of which was notoriously his motive in supporting his present nominee Mr. Reid: they had also their friends. Mr. Maurice Colles, after much wavering, joined the physicians. Thus, what for distinction's sake we shall call, the physicians' party, and the surgeon general's (who of course was supported by his serving nominees) were equal in numbers. Mr. Cusack Roney nicely held the balance between both: into which scale was the calculating liberal, the paid subfunctionary of the reforming ministry to throw the triumphant weight of his vote? Long retired from practice, he had long wished to be relieved from the cares of hospital-duty: many there were, no doubt, who would gladly have gratified him in this particular, and liberated him from the weight of his onerous responsibilities, but he had other *duties* to perform, he owed a debt to himself, and to his son-in-law Mr. Dillon, as well as to the hospital: these sacred sentiments were not to be overcome. He had long desired, long laboured to effect, though in vain, an occasion which the opportune finger of death, aided by the innovating spirit of the times, seemed now to offer kindly and freely: was he to frown when fortune smiled propitious? In short, the whole business was complete: Mr. Dillon was to be elected in the first instance: his co-operation with the revolutionary trio was guaranteed: Mr. Cusack Roney was to be purchased out by the nominee of the physicians' party, which had now the majority of votes; Mr. Crampton's supremacy was for ever annihilated. Everything was arranged to the satisfaction of the high contracting parties: Mr. Dillon who had never served his time in the hospital, and Mr. Hargrave, or Mr. Benson, or Mr. Houston, or any other Mr., who possessed the *money*, and the nomination of the physicians, were all but gazetted; the one vice, Mr. Macnamara, deceased; the other vice, Cusack Roney, receiving the difference, when some mysterious "change came o'er the spirit of the dream," which dissipated all this fine and pure diplomacy. The general was not to be out-generalled: what, lose his supremacy in the hospital appointments when he had got a nephew to bring in! Better far to maintain his influence even by purchase, though the money should come out of his protege's pocket, even though the humiliating condition were attached, of appointing Mr. Dillon to the next vacancy. Mr. Cusack Roney is soon *convinced* of the superior strategic skill of his general: he returns to his allegiance, and records his *disinterested* vote in favour of Mr. Reid, Mr. Crampton's nominee. Mr. Crampton retains his supremacy, and Mr. Dillon is only laid on the shelf for a time, till the fitting occasion occurs in which the surgeon general can at once demonstrate to to the world his gratitude to Mr. Cusack Roney, and his surpassing skill in diplomacy. Mr. Hargrave is for ever excluded from the hospital: although he served his time there, and to Mr. Crampton too, although in standing ability and character he is not to be named in the same breath with any of his competitors.

We have thus embodied and not without pain, the notorious gossip of all the medical circles in Dublin: we do it however the more readily, as it has ever been the habit of this Journal to correct any error into which we may unintentionally fall: if any one feels aggrieved, our pages are open to his defence and explanation: As journalists we are bound to lay before our readers the news of the day, that which we believe to be true, and above all, that which illustrates beyond the power of cavil the absolute necessity for medical reform.

CONTRIBUTION TO THE PATHOLOGY OF THE HEART BY THOMAS SAUNDERS, M. D.

THE direction which medicine has taken in modern times, tends to make it approach the fixed sciences. Pathology and physiology conjointly, elucidate the phenomena; changes in the organisation are connected with symptomatology, and thus will be formed a fund of knowledge, which may be successfully applied

to cases even unheard of before. This is medicine as it ought to be, and this will be the reward of modern research.

So much and so well have authors written on the diseases of the heart, that there might appear but little left for observation, such however is only an appearance. The possible deviations from the healthy structure are innumerable, and when nature presents rare pathological changes, it is for us to examine them minutely, and add them to the general stock of information.

For this reason, I publish the following case, which at least merits attention.

A. W.—At 33 had long laboured under what he called rheumatism, especially of right arm, at this he attributed to a stress from raising a load. His breathing then became affected, and was so bad when lying, that he was obliged to sit up in a chair night and day for sixteen weeks. This was somewhat relieved by tonic treatment, and he could go to bed, but his rheumatism continued very severe. About the end of July, 1836, I was requested to see him by a medical friend. On the right side of the chest, there was a pulsating tumour, about four inches in diameter, which seems to have pushed the ribs before it. When the stethoscope was placed on the region of the heart, the sounds were heard distinctly but no impulse was observed; when placed on the tumour the double beat was much stronger and could be perceived without applying the ear to the chest, and the impulse was very powerful. The distinctness of the sounds diminished in proportion to the distance from it, and percussion gave a sound similar to what the thigh presents, whilst the præcordial region yielded one exactly as in health.

Various medical men had seen the patient, and the opinions, as may be easily imagined were very different. I compared all the opinions with what I myself had observed: I concluded that it could not depend on the intercostal vessels from the double beat and elevation of the tumour. Their aneurism might have separated, but could not raise the ribs to such an extent. The position of the pulmonary veins might favour the idea that they were the cause, but how thereby explain the double beat and the strong impulse?

That it was not the innominata I was also convinced, from the double beat, from the impulse, and from the position of the tumour which extended as far down as the lower part of the sternum. Besides, there was the gradual diminution of sound from it to the usual situation of that vessel.

Was it a fluid or tumour that pushed the heart out of its usual position? Such a thing happened, I knew from the excellent observations of Costa, but I was confident that it had not done so in the present case, because though the heart could thus be moved to one side, what could force it forward also, so as even to carry the ribs along with it? Besides, percussion and the respiratory murmur showed that such tumour or fluid did not exist.

Might not the heart have been originally on the right side? A careful examination of his previous history, proved that it could not depend on such congenital malformation. Taking all the facts into consideration, I gave it as my opinion, that it was a disease of the heart itself, but I could not determine the particular organic change.

The patient died on Thursday, the 18th August, and was opened by myself on the 21st, in presence of the Drs. Sanders, Fairburn, and Young.

The internal viscera were all sound except the heart which however was in its usual place. It adhered to the pericardium—I may here notice the coincidence between this adhesion and the sounds of the heart, being heard at a certain distance from the body, another example of the fact to which I lately called attention through this excellent journal.

The ventricles were normal both in respect to cavity and parietes. The auricles however presented a very singular change, which readily explained the phenomena. The septum had disappeared and the cavity thus formed contained coagula and blood, and was extended to so inordinate a volume, that it could easily have admitted a child's head. This constituted the tumour. The parts of the ribs against which it pressed were rough and much destroyed from absorption, and the seventh was thereby completely divided. The valves of aorta and pulmonary vessels were sound. The aorta itself presented a few of these yellow elevations, which are held to be the first stage of osssification.

Though the septum was gone, and the auricles thus inverted into one cavity, the patient never showed the least appearance of blueness till the night before his death.

Upon this dissection which is probably as interesting as any on record, I need not trouble you with remarks: the

consequences deducible from it are so obvious, that they must present themselves to the mind of every intelligent practitioner.

15, *Duke Street, Edinburgh.*

FUNERAL OF DR. GALL. BY AN EYE-WITNESS.

To the death of great men much interest is attached. The closing scene of a life rendered eminent either by great exertions in behalf of mankind, or by splendid attainments in literature or science, is always contemplated with emotion. Every one is conscious of the mingled awe and anxiety awakened in his bosom by a visit, even in imagination, to the expiring couch or the lifeless bier of one whose name may often have kindled in his breast sentiments of admiration and enthusiastic regard.

To the production of such feelings many causes contribute. It will be sufficient, however, to particularize one, which exercises no inconsiderable influence in conducing to that result. It is an observation—trite, indeed, but not the less true—that the value of advantages we possess is not duly appreciated; but that we learn their worth by their loss; and it is the reflection that a final period has been put to the exertions of the individual for the benefit of his species; that the icy touch of death has benumbed into activity the hand of the writer who delighted us with his works, and chilled into silence the tongue that enchanted us with its eloquence; that the spring is dried up whence were accustomed to flow abundant supplies of instruction and delight. These are considerations which give poignancy to our grief and an edge to our curiosity. Hence the avidity with which we look for details respecting the death and interment of eminent characters, and the consequence with which circumstances connected with those events, though in themselves unimportant, are invested. From such reflections as these the writer is induced to believe, that the following particulars, which fell under his immediate observation, will not be found uninteresting.

Dr. Gall, the founder of the Phrenological system, whose researches into the structure of the brain (whether the conclusions he deduces be ultimately confirmed or refuted) have secured for him the honour of introducing a new era into physiological discussions, died while I was at Paris. Of his decease, which took place at Montronge, in the environs of the capital, the following notice appeared in a medical journal:*—"The celebrated Dr. Gall died, after a lingering illness, on Friday night, at half-past ten o'clock, at his country-house at Montronge. Dr. Gall has fallen a victim to hypertrophy of the heart, complicated with arachnitis, *ramollissement* of the brain, and enteritis." He was above the middle stature, and of great muscular powers. The disease of the heart, under which he had laboured for more than two years, proved to be "active aneurism,"—hypertrophy with dilatation. His head was unusually large, and on examination the skull was found to be twice the ordinary thickness, and the brain a third larger than the ordinary standard. The latter was immersed in spirits of wine, and placed in the museum of the deceased.

It is the custom in Paris, on the death of an eminent person, to give notice of the time of interment, and to invite all who feel so disposed to form part of the procession. In the present instance the call was obeyed by most of the medical population of Paris. The remains of the deceased had been conveyed to a hotel in the *Rue St. Honoré,* opposite the church of *St. Roch;* and thither I repaired in the afternoon of the 27th of August, the time appointed for the funeral. I found the entrance, or gateway of the hotel, hung round with black cloth; and in the middle, covered with a black pall, was placed the coffin, around which wax candles were burning. From this time the crowd began to assemble; and in about an hour, the funeral *cortège* having arrived, active preparations were made for conveying the venerated dust, insensible of the homage offered at its shrine, to its final resting-place. The coffin was removed from the place where it had been thus lying in state, and was placed on an open funeral-car;—a plan commonly adopted in France, and which, unlike the hearse in use among us, allows the spectators an unimpeded view. The car was followed by more than twenty mourning coaches, in one of which I fortunately secured a seat. Hundreds, however, followed on foot, with uncovered heads, to the place of interment, a distance of more than two miles; nor was their enthusiasm checked by their

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* The "Clinique" for Tuesday, August 26, 1828.

being exposed to a burning sun. In this order the procession moved forward, passing the magnificent column in the *Place Vendome,* entering the *Boulevards,* and thus on to the Cemetery.

The Cemetery of *Père la Chaise* stands on an elevated spot on the north-east side of the city, of which, as well as of the surrounding country, it commands an extensive prospect. It derives its name from that of its former possessor, who received it from Louis the Fourteenth, to whom he was confessor for thirty years. He was a bigotted persecutor of the Protestants, and was an instigator to the revocation of the edict of Nantes. The ground inclosed amounts to eighty acres, and is tastefully planted with trees, among which the elegant monuments, raised by survivors to the memory of departed friends, appear to great advantage. One of the most remarkable of these is the tomb of Abelard and Heloise, so renowned in story. On one of the most elevated spots is erected an elegant chapel, which is visible at some distance from the Cemetery, and forms a pleasing feature in the landscape. In this chapel the service for the dead is chanted, but in the present instance it was not resorted to ; for immediately on the arrival of the funeral procession, the coffin was conveyed to the grave which had been prepared for it. It was near that of a late celebrated actor, whose remains are covered with a plain stone, bearing only the inscription,—TALMA. It thus realizes the wish of our own lamented Byron :—

"Oh! may my shade behold no sculptured urns,
To mark the spot where earth to earth returns!
No lengthen'd scroll, no praise-encumber'd stone;
My epitaph shall be my *name alone.*
If *that* with honour fail to crown my clay,
Oh! may no other fame my deeds repay!
That, only *that,* shall single out the spot,
By that remember'd, or *with* that forgot!"

Having arrived at the spot, the spectators arranged themselves round the grave, taking advantage of the various inequalities of the ground to obtain commodious situations. All was then hushed in silence, while tributes were paid to departed genius by the more intimate friends of the deceased. Of these the principal was M. Broussais, the founder of a new pathological sect, and who has recently delivered an extended course on Phrenology. He pronounced an oration, in which he detailed the first observations of Dr. Gall, which began even in his school-boy days, and described the successive steps by which his system was brought to that state of advancement in which he left it. Some time afterwards I conversed on the subject with his friend and coadjutor, Dr. Spurzheim, who evinced, on recurring to the scene, emotions highly creditable to his good feeling.

ACTIVE HYDROPERICARDIA CAUSED BY SECRETORY IRRITATION OF THE PERICARDIUM.

Corvisart and Bouillaud make a distinction between a coloured purulent collection in the pericardium, the consequence of pericarditis, and the limpid and almost colourless serosity which constitutes hydropericardia. Laennec and Bouillaud consider the latter disease of very rare occurrence. It is however difficult in the present state of science, to cite a single case of actual hydropericardia, which was not preceded by acute or chronic pericarditis.

The quantity of fluid effused into the pericardium, varies to the amount of eight pints. In most cases an ounce or two may be accumulated during the last agony of death, The fluid in hydropericardia may be limped, colourless, yellowish, greenish, or blackish when complicated with hæmopericardia.

The pericardium is sometimes thickened, and appears as if macerated in the serosity, (Bouillaud,) a fact denied by Laennec.

It is not as yet determined that the pressure of the fluid effused in hydropericardia causes atrophy of the heart, though this state has been induced by the prolonged compression of false membranes.

The tumour formed by a large collection of fluid in the pericardium may compress the lungs, the diaphragm, the spleen, and the liver, and elevate the precordial region.

The symptoms of hydropericardia are obscure, and render the diagnosis extremely difficult. When the effusion is considerable, the pulsations of the heart are rendered feeble and scarcely perceptible to the hand, respiration and pulse are more or less affected or deranged. But the ablest authors have failed to form a diagnosis. This renders the treatment uncertain, and the ordinary means employed for the cure of other dropsies

usually fail. Paracentesis pericardii has been mentioned by authors, but I can find no case recorded in which it was performed. Desault made an opening between the sixth and seventh rib on the left side, near the apex of the heart, in a supposed case. He felt a body of water which he supposed was the pericardium. This was opened with a bistoury when half a pint of fluid escaped. The operator, Derbois, Sue, and Dumangin, successively introduced their fingers, and thought they felt the heart. The patient died on the fourth day, and the supposed pericardium was a membrane which united the edge of the left lung to the pericardium.

HYPERTROPHY OF THE HEART.

The term hypertrophy implies a pure and simple augmentation in the nutrition of an organ, without alteration of its physical or chemical qualities, or the intimate composition of the hypertrophied tissue. It is now determined by M. Bouillaud, that every tissue which composes the heart may be hypertrophied.

This condition was first accurately described by M. Bertin, in 1811, though it had been mentioned by Morgagni. M. Bertin maintained that three forms of hypertrophy of the heart existed.

In the first form, the parietes of one or more cavities of the heart are hypertrophied, without these cavities being increased or diminished in their capacity: this is *simple* hypertrophy.

In the second form, the walls of the cavities are hypertrophied, whilst the capicity of the cavities is augmented; this is *excentric* hypertrophy or the active aneurism of Corvisart.

In the third form, the hypertrophy coincides with diminution of the capacity of the cavities: this is *concentric* hypertrophy.

M. Bouillaud narrates fifteen cases of the different forms of hypertrophy, which incontrovertibly prove the accuracy of M. Bertin's conclusion. According to the numerous observations of this distinguished pathologist, hypertrophy with dilatation is the most common form of the disease, and for twenty cases of aneurismal hypertrophy, there is scarcely one of the simple form of the disease. Concentric, or centripetal, or with diminution of the capacity of the cavity whose parietes are thickened, is not so rare as the simple hypertrophy, and is more common in the right than in the left ventricle.

The weight of the heart when hypertrophied varies from twelve to twenty-two ounces, and the form, size, situation, and direction of the organ, are also changed.

Signs of Hypertrophy of the Heart.—The fundamental signs of simple hypertrophy of the heart are permanent augmentation of the force and extent of the pulsations of that organ, and augmentation of its double normal bruits, with increase of the extent of the dulness on percussion of the præcordial region, and a visible projection in the latter position in some cases.

When hypertrophy is considerable, the movements of the heart are visible over a great extent of the left side of the chest, and even in the epigastrium where they some times cause a shock that may be distinguished through the dress of the patient. The apex of the heart raises the sixth and seventh or eighth intercostal space, while the base of the organ corresponds to the third or second intercostal space.

When the hand is applied over the cardiac region, the beatings of the heart are strong, and resembles the blows made with a hammer, or with the fist. This impulse is better perceived with the stethoscope, but best of all with the naked ear. If the ear is applied on the præcordial region, the head is raised at every ventricular contraction, with a force proportional to the degree of hypertrophy.

The pulsations of the heart are not more frequent than natural, unless when mental emotions, fatiguing exercises, or errors in regimen affect them.

The bruits of the heart are modified by the form of hypertrophy. When the thickness of the ventricular walls is twelve or fifteen lines, and when the cavities of the ventricles have lost their normal capacity, the bruits of the heart are dull, obscured, and as if stifled.

But when the thickness of the ventricular walls is moderate, and the ventricular is of its normal size, the bruits of the heart are very strong, clear, and sonorous, are propagated to a more considerable extent of the chest, and often even to the posterior part of this cavity. If the ear is now applied to the region of the heart the metallic tinkling is heard. There is no pain in the region of the heart in hypertrophy; but patients sometimes complain of a sense of weight, in the region of the stomach, and in the phrenic centre.

The extent of the dull sound in the præcordial region enables us to determine with geometrical precision the size of the heart.

Projection of the præcordial region is rarely observable. M. Bouillaud has described only seven cases. It may be determined with the hand, by inspection, or by mensuration.

Reactional signs of hypertrophy of the heart. The pulse, in simple and aneurismal hypertrophy of the heart, is strong, full, large, vibrating and regular. In concentric hypertrophy it is less developed, and more compressed. Patients affected with simple hypertrophy have the countenance animated, the eye brilliant, the skin better than natural, and there is a tendency to hemorrhage. When the right ventricle is hypertrophied, the state of the pulmonary artery cannot be determined.

When there is no disease of the valves or contraction of the orifices to oppose the return of the venous blood, there are no passive congestions whether of blood or serosity, as when these diseases exist.

When hypertrophy is considerable, the enlarged heart occupies a third or fourth part of the left lung, and the respiration becomes short, frequent, and difficult.

In such cases there is not only hypertrophy but obstruction to the free course of the venous blood, which causes a serosanguineous congestion in the lungs.

Diagnosis of hypertrophy of the left ventricle. The pulsation of the heart is most distinct in the region of the cartilages of the fifth, sixth, seventh, and eighth ribs; the dullness of sound on percussion, and the projection of the cardiac region, indicate hypertrophy of the left ventricle. The pulse is strong, the face flushed, the eyes sparkling or brilliant, there is head ache, or sense of tension, dizziness, bleeding from the nose, &c.

When the right ventricle is hypertrophied the beatings of the heart, and palpitations are particularly felt at the inferior part of the sternum, where the dulness of sound on percussion is most remarkable, and the pulse is weaker than when the left ventricle is affected. The patient is subject to active congestion of the lungs, and bloody expectoration of a vermillion colour. In some cases, there are pulsations and fluctuations of the jugular veins, or even simple dilatation of them, and then there is active or passive aneurism of the ventricle and the auricle of the right side. Nevertheless, the venous pulse is not a necessary consequence of hypertrophy of the right ventricle, but when it exists, it arises from imperfect closure of the auriculo-ventricular aperture, which allows a reflux of blood into the right auricle and the veins which open into it.

Influence of the hypertrophy of the left ventricle of the heart on hæmorrhages in general, and on that of the brain in particular. The influence of the left ventricle on the general circulation of the blood predisposes to hæmorrhages in those parts which offer any opposition to the effort of the blood, among which, are certain mucous membranes, the brain, &c. M. Legallois was the first who pointed out the influence of considerable hypertrophy of the left ventricle in causing sanguineous apoplexy, cerebral hæmorrhages, ramollissement, the cretaceous degenerescences, and the fragility of the cerebral arteries which readily give rise to rupture. These diseases are not however constantly excited by hypertrophy. The influence of the right ventricle is also remarkable. M. Bouillaud gives an account of three cases of hypertrophy of the right ventricle, followed by pulmonary apoplexy or hæmorrhage.

The immediate causes are fatiguing exertions, occupations which require great efforts, moral affections which excite strong palpitations, a stimulant regimen, &c. Corvisart has enumerated the following causes of hypertrophy; shortness of the arteries, defects in the relation between the calibre of the vessels and the quantity of blood that ought to pass through the heart; all obstacles opposed to the course of the blood whether on account of a vice of organization, or any pathological condition, whether by the influence of moral affections on the action of the heart, by corporeal exertions, and perhaps also on greater or less stimulant quality of the blood which ought to augment or diminish the force of the organ.

Treatment.—The chief means of treatment of hypertrophy of the heart are general and local bleeding; sedatives, low diet, and quietude of mind and body. Leeching or cupping is preferable, and generally more effectual than venesection. I have a patient now under my care, at the Western dispensary, who solicits cupping, and has had the operation performed over one hundred times. Leeching is preferable in cases of wo-

men. Blisters near the affected part of the heart are beneficial. They should be kept open for some days, and the vesicated surface is covered with from six to fifteen grains of powdered digitalis, by M. Bouillaud. The antimonial ointment is also a useful counter irritant. I have found the hydriodate of potass combined with digitalis, hydrocyanic acid, and colchicum an efficacious remedy when continued for some weeks. As immoderate action of the heart has caused the disease, it is essential to avoid violent mental emotions, and all exertions which accelerate the circulation.

Laennec relates a dozen examples of simple hypertrophy, or with dilatation which were cured, and in one case, the heart was absolutely atrophied. R.

North London Hospital.—*Abstract of a Clinical Lecture, by Professor Samuel Cooper, delivered session* 1836.

The first case I have to speak of to-day, is one of *Severe Burn with the post mortem appearances.*

Elizabeth Grantham, æt. 3, brought to the hospital Oct. 12, with extensive and deep burns of various parts, occasioned by her clothes taking fire. The upper part of the chest, the neck, the chin, and cheeks were all severely injured, the skin being completely destroyed. The left arm and hand had also suffered severely, but the right only slightly. The lower part of the chest had essayed, except at one point under the left breast. The back, the abdomen, and the lower extremities were not implicated. The burning in some places corresponded to Dupuytren's fifth degree, as the skin, cellular tissue, and vessels were totally disorganized and turned into blisters.

The burnt surfaces were plentifully sprinkled with flower, and, as the depression of the system from its shock or irritation was considerable, a tea-spoonful of syrup of poppies, with eight drops of liq. ammon. subcarbon. was given in a little water.

Without entering into the details of treatment, I may state, that the child went on tolerably well until the 21st, when the eshars began to open, which is always a period of great danger in extensive burns. On the 24th a deep eshar was detached from the chin, and side of the jaw, and on the 28th other very deep ones came away from the arm, leaving the humerus almost exposed.

The child lingered till the 14th of Nov. when she died, worn out by suffering and fever.

Gentlemen, what I particularly wish you to attend to in this case is, that, in the post mortem examination, the small intestines were found inflamed in various places, and that purulent deposits were met with in the lungs. Practitioners in this country, have not generally been aware of the considerable share which inflammation, suppuration, and even ulceration of the internal organs frequently has in producing the fatal termination of burns. For this important fact, which dictates a more common recourse to antiphlogistic means, than is usually had, the profession are under obligations to Dupuytren.

Last summer, a boy was brought to the hospital in one of my accident weeks, who was so dreadfully burnt, that he died a few hours afterwards; in that case, there had not been time for inflammation of the mucous tissues of lungs or bowels, to occur; but many of the internal organs were gorged with blood.

Femoral Hernia.— Operation. — Death, from Sloughing of the Wound.

Gentlemen,—The poor woman, Mary Parrott, on whom I operated for strangulated femoral hernia, and whose case I detailed in the last clinical lecture, continued to go on very favourably for four or five days after the stricture had been divided and the bowel reduced, excepting that the wound had not united on the removal of the first dressings. At length she was attacked with hiccough, and the wound assumed a gangrenous appearance. Here, we are to recollect, that her age was 77, and that she had been continually vomiting for four days before her admission into the hospital. We may conceive, therefore, that she must have been in a most reduced condition before the operation was performed. In another such case, I think it would be better to operate, without a trial of the tobacco clyster, or any other debilitating means. The patient's sickness ceased, and she had free motions almost immediately after the operation. In another such case, perhaps, it might also be advantageous to allow more nourishment at an earlier period after the operation, a plan which I was deterred from adopting by the dark colour of the protruded bowel, and my having seen cases in which the intestine gave way two or three days after the operation, as I suspected from too much food having been allowed. The

post mortem examination exhibited scarcely any other inflammation than sloughing of the wound, which, as the operation was done with as much facility in about three or four minutes, without any material disturbance of the parts, must have arisen from the depressed state of the constitution.

Cancer Labii Pudendi.

I next advert to the case of Maria Noble, a woman, from her appearance, more than 70, who is affected with carcinoma of the right labium pudendi, and a scirrhous induration now extending a good way within the vagina, and rather quickly encroaching. She was married when 36, and has been a widow six years. She has never had any children. Her father had a cancer of his cheek; but none of his family, except himself, had been afflicted with any form of malignant disease. It seems from her own account, that she has suffered from prurigo for 12 years, and she ascribes the beginning of the present disease of the labium to her frequently scratching the part to obtain relief from the annoyance of the former complaint.

About two months before her admission, a tumour attended with pricking, shooting pains, formed on the labium, and, in a fortnight, ulcerated. The glands in the groin are not involved. Occasionally she experiences a difficulty of voiding the urine, a part of the disease approaching near the course of the meatus urinarius.

Soon after her admission, before the disease had advanced into the vagina, I had some thoughts of removing the labium; but, after a consultation with Mr. Liston, it was judged advisable not to make the attempt to cure the poor woman by operation. Her great age, and the probability of not being able to get away the whole of the disease, were the grounds on which this decision was formed.

Palliative treatment, therefore, is all that is adopted. The ulcer is dressed with a lotion, composed of ʒ ij of Extr. Conii in Aq. Oj.

Contused and Lacerated Wound of Head. — Inflammation and Suppuration within the Cranium.—Trephining.

William Coleman, aged 63, a coachman, admitted August 31. A stout plethoric man, who had fallen from a hay loft and met with an extensive lacerated wound of the scalp. He had been stunned by the fall, in which condition he remained for three quarters of an hour. The scalp was detached from the vertex to the extent of four square inches. On arriving at the hospital, the man was perfectly sensible. The flap was replaced, and an attempt was made to procure union, but this did not succeed. No symptoms of cerebral disturbance came on until a very late period. The case was at first treated upon antiphlogistic principles, calomel, aperients, &c., and the part covered with water dressings. The flap, however, sloughed away, as well as the aponeurosis and pericranium, leaving a portion of the bone denuded larger than half-a-crown. I requested, gentlemen, to observe the changes which would now take place on the surface of the cranium, especially the likelihood of the production of granulations upon a portion of the exposed bone, and the alteration of colour likely to happen in any part of it about to perish or to fall into the state termed necrosis. We were all interested in seeing the great efforts which nature made to cover the whole bone with granulations, and thus preserve it. In fact, notwithstanding the patient's advanced age, three fourths of the denuded surface became covered with granulations, and about one fourth of it assumed a brownish colour and perished.

Nov. 3. The granulations around the necrosis looked well, and a groove was forming round the sequestrum or dead piece of bone.

Nov. 10. Some pains in the forehead complained of.

Nov. 15. Sudden attack of hemiplegia of right side. Venesect. ad ʒ xvj. Ten oz. of blood also taken away by cupping from behind the left ear. Towards evening, use of upper and lower limbs nearly restored, but great pain and weakness complained of: pulse low.

Nov. 16. Hemiplegia had subsided; Calomel and tartarized antimony freely exhibited. These were principal medicines.

Dec. 3. Complains of twitches of the muscles of right side of body and face; occasional inability to speak, and great debility; severe pains in the head. He had rigors a day or two before the inability to speak commenced; this symptom denoted suppuration within the cranium, though the exact place of it was uncertain.

Dec. 7. More or less coma, with convulsive twitches of the muscles, and increasing paralysis of the tongue and right arm. Under these circumstances, feel-

ing afraid that matter had formed somewhere within the cranium, I determined to remove the part of the bone affected with necrosis. Indeed, if this involved both tables, of which there was a probability, it seemed that the dead bone itself might be a source of irritation, a case in which M. Velpeau and other judicious surgeons very properly enumerated as one urgently requiring the trephine. The precise situation of the matter, however, was of course uncertain, but I judged it better to let the patient have the chance of any benefit which might result from perforating the cranium and removing the dead bone. If matter were not directly under the part, the operation of taking away the sequestrum, would not add to the patient's danger; and he would be certain of perishing, if the circumstances did not admit, as I apprehended would be the case, by the pus being discharged. A perforation was therefore made, but no matter found directly under it.

Dec. 8. Still comatose, and cannot articulate or move his tongue; muscles of face and right side of body paralysed.

Dec. 10. After several convulsive fits, the patient died at half-past 11 P. M.

Post Mortem.—Skull carious above the occipital protuberance; dura mater sloughing where it has been exposed by the trephine, and in other parts highly injected. Over the whole surface of the right hemisphere, between the arachnoid membrane and pia mater, pus effused between convolutions, and even covering some of them. In the substance of one convolution, a small abscess was met with. On the left side, a patch of pus and lymph between two layers of arachnoid with corresponding depression in the hemisphere. This was under the carious part of the external table, towards the occipital protuberance, the existence of which caries was not known during the patient's life. Pus was also formed in the cerebellum, but not directly connected with the other collection of matter. Bloody serosity in ventricles. Other viscera healthy, except the right kidney, which was diseased and contained some osseous matter.

I have heard it observed by some very experienced surgeons of hospitals, that, at the present day, we less frequently meet with suppuration between the inner table of the skull and the dura mater after injuries of the head, than under it and in still deeper situations. This case, and several others which have occurred in this hospital, tend to support the correctness of the remark. In Pott's time, we must infer from his description of the present subject, that matter between the skull and dura mater after blows on the head, was more usual than at the present.

The point is of practical importance with reference to the question of trephining. If, after perforating the cranium, the appearance of the dura mater indicated the probability of matter directly under it, you should make a puncture; but it would require a master of the art like Dupuytren, to be able to determine the circumstances which would justify the bold proceeding of plunging a lancet into the substance of the hemisphere, as he did, to the depth of an inch, so as to make an outlet for a cerebral abscess.

MEDICAL EDUCATION AND INSTITUTIONS.

ART. X. REMARKS ON CLINICAL INSTRUCTION. BY W. W. GERHARD, M.D., ONE OF THE PHYSICIANS OF THE PHILADELPHIA HOSPITAL AT BLOCKLEY.

Clinical medicine is not regarded in this country as a distinct branch of medical instruction. The professor of the practice and theory of medicine in our schools, is sometimes expected to illustrate his course of lectures by examples of cases found in the wards of an hospital, to which he may chance to be attached. If the class of students be small, they accompany the physician in his visits to the wards, hear the prescriptions, and listen to such remarks as may escape him. If the students be more numerous, a certain number of patients are brought into the amphitheatre of the hospital, and the details of their cases are communicated to the pupils, while the patients are still before them, or immediately after their removal. In this manner a more vivid impression is made upon the senses, and the recollection of the group of symptoms observed in the case and of the method of treatment employed, is much more permanent. Demonstrations of pathological anatomy are sometimes made in the same amphitheatre.

This course is pursued at the two hospitals of Philadelphia, but neither of these institutions was formerly accessible to the students more than twice a week. At Boston, and, I believe, New York and Baltimore, the public visits are more frequent; but in none of these cities has any physician devoted his time and ta-

lents to the especial cultivation of clinical medicine, which is still looked upon as a mere appendage to the theory of the science.

When we compare the slender opportunities generally offered in this country with the excellent organization of the clinical schools of the continent of Europe, we are obliged to admit one of two conclusions,—either that, in even the oldest and most conspicuous of our medical colleges, clinical medicine is considered as a superfluous branch of instruction to the student; or, if as a highly essential part of medical education, that it is of so easy attainment, that a dozen or twenty lectures upon the subject are amply sufficient for qualifying students for receiving the degree of doctor in medicine, affirming to the world they are skilled in the medical sciences. This imperfect mode of instruction is strictly limited to lectures, as very few of the pupils possess the necessary facilities for examining the symptoms of the patients, and acquiring those habits of investigation which may serve them in after life.

The imperfect state of medical instruction in this country is not owing to any deficiency of instructed physicians amongst those charged with this department of instruction. They have done much to remedy the evil, but the occupations resulting from an extensive practice, or from active employment as teachers of other branches of the science, necessarily impede that uninterrupted devotion to clinical studies which is requisite for their successful prosecution.

A source of difficulty may also be found in the unfortunate system generally pursued in our hospitals. Each physician or surgeon is on duty but a few months in each year. The interest which he might feel in his cases is diminished by his inability to watch their progress during a sufficiently long period, and his habits of regular hospital attendance are broken up. From his infrequent visits, it is rarely possible for the attending physician to preserve that degree of control over the treatment of the cases which is essential to the purposes of clinical instruction. The patients are left to the management of the house physicians, who in most cases have scarcely completed their preliminary studies before their appointment to their situations. Such a course is necessarily destructive to accurate observation, and must greatly diminish the advantages of large hospitals as schools of practical medicine.

I shall now enumerate the chief requisites for a course of medical instruction; I have already pointed out the mode pursued at the Philadelphia Hospital, where this department is better organized than in most of the American hospitals.

General requisites for a complete course of Clinical Instruction in the Practice of Medicine. — These requisites may be classed under the following heads:—1. Of the Patients. 2. Of the Pupils. 3. Of the Teacher. 4. Of the Instruction by Lectures. 5. Examination of the Patients' cases, and Demonstration of the Pathological Changes of the Body. 6. Of the Practical Application by the Pupils of the principles they have received.

The necessary dependence of many of these particulars upon circumstances beyond the control of either teacher or pupil, may prevent their proper extension, but each part of the scheme of instruction should be perfected as far as the case will admit.

1. *Of the Patients.*—The basis of clinical instruction should always be sought in an hospital, where a considerable number of patients are collected together. The advantages of hospitals is obvious. Different diseases are presented at the same time, so that the symptoms which characterize them may be compared together, and their points of difference or resemblance may be clearly indicated. In the more common diseases, from the number of patients affected with them, the peculiarities of individual cases of the same malady may be often studied. Those affections which are more rare require a careful examination of each example which may present itself, which is rendered easy by the long residence of the patient at the hospital, where he may be constantly under the inspection of the medical officers. The facilities for noticing the symptoms and watching the effect of remedies, are in all cases greater in the wards of an hospital than they can possibly be in private practice, where each patient is at a distance from the others, and can neither be visited at as short intervals of time nor be examined minutely. Finally, the opportunities for careful inspection of the morbid phenomena remaining after death are always greater in hospitals than in private families.

These are the chief advantages peculiar to hospitals; but there are also some circumstances which diminish the value

of such institutions, as schools of practical medicine. The patients admitted into them are rarely seen in those early periods when therapeutic agents are most efficient; most of them are labouring under the effects of diseases of such long standing, that the structure of the organs has become altered by deposits of new products into their tissues. Almost all the patients have been subjected to various plans of treatment, not always of the most judicious kind, sometimes masking the real symptoms of disease, and confounding them with the effects of different medicinal agents. In such cases of doubt a long and careful interrogation is required to enable the physician to draw the distinction between the primary and the accidental symptoms. It is, however, generally known, that the best marked and most severe examples of disease are met with in hospitals, so that the physician who has studied chiefly in these large institutions is agreeably disappointed, at his entrance upon practice, at the milder aspect which disease presents.

The actual arrangement of well organized hospitals differs but little; the patients are rarely classed in wards specially appropriated to the treatment of particular diseases, although such a division is not without its utility when the hospital is very large. But in most institutions of this kind we are compelled to place patients affected with various diseases in the same wards; this method facilitates the comparative study of different affections, though it is less favourable to the thorough investigation of the various symptoms of each malady.

The furniture of the hospital should be simple, and limited to articles of real utility. The bed on which the patients are placed should be of a suitable height, and made in such a manner as to permit a complete examination of every part of the body. Other expedients for the convenience of the pupil, such as labels over each bed, referring to particular numbers of the house register, are readily suggested by the peculiarities of each clinical school.

II. *Of the Pupils.*—A knowledge of the elementary sciences required in a course of medical instruction must be obtained by the pupil before entering upon his clinical studies. Anatomy, phisiology, chemistry, and the materia medica, should be already studied, and pathology and therapeutics ought to be so far familiar that he can easily understand the terms and mode of reasoning which are constantly employed by the clinical teacher.

As the time spent by the pupil at an hospital must necessarily be short, he should employ it fully, and avoid all conversation in the wards not strictly connected with the facts presented by the case before him; even the comparison of those facts, and the deductions from them, should be postponed until a better opportunity. In his examination of the patients, the pupil should studiously avoid all unnecessary questions; nothing should be asked but what is indispensably necessary for understanding the case which has been detailed by the teacher. Those examinations which are made by the actual inspection and touching of the patient's body, must be conducted with still greater reserve than mere interrogation; the pupil should avoid all unnecessary exposure as well as fatigue to the patient, and should practise his examinations with so much lightness and caution as to avoid giving the slightest pain.

Some pupils should be selected to preserve a record of such facts as may be useful materials for the science of pathology. These pupils must be amongst those most advanced in their studies; their examinations should be in accordance with a plan of investigation previously adopted, and their reports should be afterwards read and verified by the teacher. The number of pupils of this class must necessarily be small; they should devote a long time to the patient examination of chronic cases, but a shorter period will suffice for the study of the acute forms of disease. The cases noticed by these students will contain an account of the symptoms and of the physical alterations peculiar to each, an analysis of the signs necessary to the diagnosis and prognosis of the disease; should afterwards be given as to the best mode of treatment. Such an exercise is the most perfect practical examination which the physician can undergo—it is the touchstone of his professional abilities, and is a test which should always be demanded before his professional abilities, and is a test which should always be demanded before his entrance into practice. The length of the course must vary according to the amount of knowledge possessed by the pupil: six months at least should be devoted to clinical instruction, which need not consume more than a part of the day.

III. *Of the Teacher.*—In a course of clinical instruction, the success at last must depend upon the physician who is charged with it. He must give the impulse to the inquiries of his pupils, and must direct their enthusiasm into a proper channel;—he must verify the accuracy and extent of their acquirements, and he should contribute, by his publication, to the facts possessed by medical science; for such requisites in a teacher, a mind fittest for observation, and a long protracted course of special studies, are both indispensable. The science of pathology has become so extensive, and the means of investigating disease so numerous, that a long devotion to his special objects is necessary to place a clinical teacher upon the level of modern science.

The practice of most countries is not in accordance with these views. Clinical instruction is regarded as nearly analogous to ordinary medical practice, and the only requisite for a clinical teacher is a long continued and extensive practice, which necessarily tends to prevent that constant devotion to the progress of the science demanded in an instructor for the younger members of the profession.

IV. *Lectures* are less necessary in a course of clinical medicine than in any other department of instruction; they should be closely connected with the cases at the moment in the hospital, and should retain as systematic an order as is compatible with the irregular entrance of patients affected with special diseases. The peculiarities of the case actually under inspection should be mentioned and compared with the symptoms of other cases of the same disease.

V. The examination of patients at the bedside is made in presence of a part of the class of students; it should be directed in such a manner as to habituate the pupils to habits of correct observation, and of critical analysis of facts described by the patient as occurring previously to his entrance into the hospital. An important addition to this part of the course is the demonstrations of pathological anatomy when practicable, to verify diagnosis, and render the classification of disease more perfectly understood by the pupils.

VI. The last part of the course is the practical exercise of the pupils. They should be required to examine patients, indicate their symptoms, and make their own inferences as to the nature of the disease. They must afterwards recommend the remedial measures, which they prefer, and submit their reasons to their teacher. This practical sort of instruction is more appreciated in Germany than in France or England.

It is, however, in some respects, the most important part of a scheme of medical instruction. It is the practical application of the doctrines taught in the schools, which must become the daily and hourly occupation of the practitioner. It is the bed-side experience which is of absolute necessity to the physician, and must be gained by him slowly, and at the expense of the comfort of his patients, or rapidly and without obliging the sick committed under his care to pay their tribute towards the completion of that education which ought to have been finished before entering upon practice. Not only does the young practitioner gain experience slowly and with difficulty, if unaided by those who are farther advanced in their professional career, but there are many methods of explication of disease, and there are peculiar habits of observation that can scarcely be acquired by one who is confined to his individual experience. These habits of accurate observation are slowly acquired without the aid of a judicious system of clinical instruction.

MR. URE'S REFUTATION OF DR. BUREAUD'S REJOINDER.

(To the Editor of the London Medical amd Surgical Journal.)

Sir,—Having seen in the last number of your excellent Journal, a laboured and prolix article from Dr. Bureaud to establish various points, which, with one or two exceptions, are scarcely worthy of disputing; I was reminded of the fable, "parturiunt montes nascitur ridiculus mus."

In reference to the chloride of zinc, I have to inform your readers, that its corrosive nature has been known in England for the last twenty-four years.* And in Hufeland's Journal for the year 1826, the *zincum muriaticum* in powder, is described as a local remedy in cancerous sores, producing an eschar that separates in eight days.

With these facts before me, was it likely I should lay claim to the introduction of the above substance into

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* Davy's Chemistry. London: 1812.

this country, or call myself "Author of a new Method of treating Cancer by the Chloride of Zinc,"* as Dr. Bureaud has done within the last year.

I am quite willing to admit, that Dr. Bureaud imported a certain French paste found to have been endowed with escharotic properties. But that paste of his I never saw; I never witnessed its application; nor was I ever made acquainted with its composition.

I am farther ready to admit, that Dr. Bureaud employed his paste at St. Bartholomew's Hospital from the evidence adduced.

Allow me, Sir, now to submit to your readers the liberal amount of original information which Dr. Bureaud was pleased to communicate to me on the subject of the *pate de Canquoin*. He informed me that M. Canquoin had not given to the world the real composition of his remedy; that he demanded of Dr. Bureaud the sum of 50,000 francs to reveal it to him, but Dr. B. declined his offer, because he had detected the secret, and would not divulge it to any one, before he published! As I said before, I became aware of the escharotic nature of the chloride of zinc independently of Dr. Bureaud. How far Dr. Bureaud has adhered to his intention of disclosing the secret, may be seen on referring to the review of his pamphlet in your Journal. He has contented himself with giving a *verbatim* transcript of a formula which he held to be inefficient and erroneous.

Dr. Bureaud has insinuated that I went over to his house during his absence unauthorized. To this I reply, that Dr. Bureaud the evening on which he waited upon me, and solicited me to take charge of his patients during his absence, at the same time requested me to go over to his consulting room of a morning, as he had cases of *chaude-pisse* (clap) that came to take his advice; sometimes as late he said as *one o'clock* in the day. According to his instructions I went frequently over, without them I should never have done so. On one occasion when I had failed to attend, a paper was sent me desiring me to visit the chicken pox case, alluded to in my letter of the 14th current.

As to what Dr. Bureaud says about Canquoin's memoir lying on his table, *I positively declare that I never saw M. Canquoin's memoir either in Dr. Bureaud's house, or in Dr. Bureaud's possession.*

Dr. Bureaud maintains that the cancer question was his "sole motive" for going to Paris. Dr. Bureaud, before his departure, enumerated to me several additional reasons for going thither. On his return he shewed me Leblanc's work on metallurgy, now publishing in Paris, and said he wished to undertake the editorship of it in this country.

That I did not simply confine myself to the French memoir, as Dr. Bureaud asserts, may be ascertained on referring to my early papers.

Dr. Bureaud maintains, that I told him I employed arsenical liquor at Charing Cross Hospital; that is a misstatement. I employed the chloride of zinc at that hospital in the month of November 1835, as I prove.

Dear Sir, Dec. 28, 1836.

I perfectly recollect the circumstance of your applying your preparation of the chloride of zinc to a patient under my care in the Charing Cross Hospital in November 1835. Your's truly.

J. Howship.

Alexander Ure, Esq.

The insinuations Dr. Bureaud has levelled against me, of having had recourse to his paper, I strictly deny.

Dr. Bureaud accuses me of neglecting the cases published by him. I subjoin one, and leave your professional readers to judge of its scientific importance.

"Case 3. *Cancer on the left breast, length, ten inches*—Mad. B. aged 45, living on a farm near Beauvais, had been ill for two years. One day a beggar came to the door, walked in, and seeing her alone, did not beg, but desired her to give him whatever she had in the house. The servants being out Mad. B. submitted quietly, yet the beggar threatened to cut her throat; she was frightened, jumped on horseback, and hastened to her neighbours to seek assistance. Her servants arrived in time to catch the miscreant, and delivered him over to the hands of justice.

Whether Madame B. received a blow while running, or in her haste to get on horseback, or whether from the effect of fright, a few days after she felt lancinating pains in her breast, with hardness of many of the glands.

Several applications were made; the first on the 29th of April. On the 15th

* Advertisement Sheets of No. II. of the "British and Foreign Medical Review."

of June, I saw the patient; nearly all the inferior part of the left breast had been taken off, and the sore was almost healed.*

That which I have claimed in reference to the introduction of the chloride of zinc, is the gypsum paste. Namely the substitution of anhydrous gypsum for the wheaten flour prescribed in the French formula. I prefer as a diluent an inert inorganic substance, which while it counteracts the deliquescent properties, furnishes a porous medium though which the escharotic may transude into the morbid tissues, to an organic glutinous substance.

The new and I believe important fact in animal chemisty of the action of *chloride of zinc* upon albumen, first observed and stated by me, and the consequences deducible relating to the morbid albumen of cancer, are also peculiarities to which I lay claim.

I would now notice the quibble of Dr. Bureaud, as to the employment of the terms *curing* and *treating* cancer, upon which he attempts to show himself off at my expense, were it not to point attention to Dr. Bureaud's report of his cases, where his adoption of the term *treatment* is very prudent.

I have to express my thanks to Mr. Williams, for affording me this opportunity of self-justification. Had I shrunk from an investigation of the motives which led me to act in this matter as I have done, I should not in May last have publicly come forward, and read a paper to a society, of which Dr. Bureaud is a member, and in the habit of attending, on cancer and the application of the chloride of zinc in its treatment.† I am,

Sir, your most obedient servant,

ALEXANDER URE.

London, 27th December, 1836.

CASES OCCURRING IN THE CLINICAL WARDS OF GUY'S HOSPITAL.

Case of Hydatids discharged from the Lungs.

Reported by Mr. JOSEPH RIDGE.

Ann Smith, aged 15, a fine, brown-haired girl, somewhat short in stature, was admitted into the Clinical Ward, under Dr. Cholmeley, Dec. 16, 1835, She was then full in the face, and, indeed, rather fat generally; though she said she was much thinner than she had been a few months before. Her mother stated that she had generally enjoyed good health, with the exception of some pain in the right side, occurring at distant periods, and attended with slight cough, but never amounting to serious illness. She had at no time been jaundiced, or affected with ascites, and the alvine evacuations had never deviated materially from the healthy character. The catamenia had not appeared.

She lived in Hampshire, her native county, until twelve months before her admission, when she came to London, and obtained employment as a servant, and continued her occupation till eighteen weeks previous to her admission, when, without any particular exposure to cold, she was seized with pain in the chest, attended by expectoration and much febrile disturbance, and for this she was placed under medical care. As these symptoms diminished, diarrhœa and profuse perspiration, which was most excessive in the morning, supervened, and continued till she came into the hospital. At the time of her admission, her countenance was flushed, she felt pain about the sternum, and scrobiculus cordis, upon taking a deep inspiration; her tongue was covered with a loose white fur, and her pulse was 120, full and jerking, but compressible.

The anterior part of the chest was healthily resonant, upon percussion, on the left side, as also on the right, above the mamma; but below this there was great dulness, extending to the inferior part of the axilla, and it was also observed posteriorly upon the same side, from the spine of the scapula downwards, where a flattening of the parietes was observed; the posterior part of the chest sounded well. Cavernous respiration, with shrill gurgling, and very distinct pectoriliquy, were heard just below the right mamma, and over a large space posteriorly. Mucous and sonorous rattle were heard over the greater part of the left lung. The impulse of the heart was great and diffused.

Cucurb. cruent. scrob. cord. ad ℥iv.
—Sumat Tinct. Rhei, Ol. Lini āā ℥ij. Tinct. Opii, m. x. ter die.

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* Review in your Journal for 5th November, p. 314.

† See report of a meeting of the Westminster Medical Society, in your Journal for that month.

Dec. 17. She perspired much during the night, and has passed several loose motions of a light yellow colour. The mucous expectoration continues. She complains of pain on pressure across the epigastrium. Pulse 120, sharp and full, but soft.

Hirud. xv. scrob. cord.
Mist. salin. c. Tinct. Digital. m. x. ter die.

18. She has passed several relaxed motions; her cough is very troublesome, but a full inspiration induces no pain; skin very moist.

Linct. Opiat. p. r. n.

22. The tongue has become cleaner, and the cough and expectoration less: dejections not so loose, of darker colour; pulse 130, jerking, compressible.

Sumat Ol. Ric. ʒ iij. cras mane.

25. She has been unable to sleep on account of her cough, and has perspired profusely; she complains of hearing a whizzing noise in her head. The impulse of the heart is considerable, and can be felt over a large space; and the præcordial region is somewhat duller than natural; the rhythm of the heart is perfect, and there are no preternatural sounds, whilst the natural ones are clear and pure, and to be heard over the greater part of the chest.

Empl. Canth. sterno.
Potas. Nit. gr. viij. Syr. Papav. ʒss. Inf. Rosæ comp. ℥iss. ter die.

26. Vomited last evening a brown bitter fluid. Cough and palpitation troublesome.

Pulv. Ipecac. gr. xij. st.
Liq. Potass. Subc. Tinct. Hyosc. āā m. xv. Syr. Tolut. ʒ ss. Julep. Nitri ℥i. quater in die sumend.

28. Action of heart violent and rapid; portions of the expectoration of a purulent character; cheeks flushed; mucous crepitation at apex of right lung; two loose motions of a more healthy character.

Adde Inf. Digital. ʒ i. sing. dos. mist.

Dr. Bright now became Clinical Physician.

31. Countenance flushed: irritability of the heart increased: pulse 150: tongue loosely furred: perspirations continued.

Adde Syr. Papav. ʒss. sing. dos. mist.

Jan. 1. Last night she complained to the nurse of being much worse; and at five o'clock this morning felt herself, suddenly, nearly suffocated. She said, she thought something had given way in her chest: and coughed up continually, in large quantity, a dark brown offensive muco-purulent matter, some portions of which were mixed with blood, and contained cysts, which were flattened and compressed, and had the character of hydatids: countenance anxious and depressed. She is bathed in profuse perspiration: bronchial wheezings audible at a distance: no pain in the chest: pulse 130: jerking, soft.—Pergat.

2. She has continued to expectorate matter of a lighter-brown colour, partly tinged with yellow, and containing cysts which are now distinctly recognised as hydatids (some of which are preserved in the museum): the sputa in the last twenty-four hours amount to about two pints: she complains of no pain in her chest or region of the liver: tongue thickly coated: three loose motions: some fulness in the right hypochondrium.

Mucous and sonorous rattle, and moist crepitation, are to be heard above the inferior angle of the right scapula: below, there are cavernous respiration, loud gurgling, and a very clear resonance of the voice: these are heard also, but in less degree, at the anterior and inferior part of the right side, and at the lower part of the axilla: there is also gurgling in the subclavicular region, but no pectoriloquy. The bronchial rattles in the left lung continue.

Mist. Cretæ c Conf. aromat. bis die.—Omitte medicamenta alia.

4. Matter expectorated much the same as to character, resembling eggs beaten up: the presence of bile in it is shewn by the chemical tests: the cysts, which are not entire, may be inflated: aspect improved: tongue less furred: pulse 120.

Jull. Amm. Acet. c Nin. Ant. tart. et Tinct. Camph. com. ʒss. ter die.

5. Expectoration of deeper yellow colour: no bile in the motions, which are figured, and clay-coloured: urine pink, from abundant deposit of the lithates: inordinate pulsation in epigastrium, continued along the course of the aorta.

Hyd. c Cretâ gr. ij. c Pulv. Doveri gr. iij. h. s.

6. The sputa are of a bilious tint; more fluid; and contain less mucus and very few cysts. She can lie on either side; but cough is induced when she turns on her back. Perspires less; feels

stronger; one scanty figured motion, of a clay colour.

Pulv. Rhei gr. iij. ex Julep. Menthæ, bis die.

Empl. Picis. Burgund. lateri dextro.

9. She has coughed up an increased quantity of a very tenacious yellow mucus, with no hydadids; or, if existing, they are so intimately blended with it, as not to be separated. Motions continue to ue consistent and very pale: she wishes for an egg or more; is allowed two.

11. Improving in appearance and in power. No alteration in sputa. Tongue less furred. Pulse 105, softer. Skin not so moist.

Ext. Hyosc. gr. iij. nocte maneque sumend.

13. Dejections white. Expectorated matter still abundant. Fluid portion green: the more viscid mucus of a light yellow colour. One cyst found in that of yesterday. Rest not so much disturbed by cough. But little perspiration. Action and impulse of heart diminished.

Liq. Potass. Tinct. Hyosc. Vin. Ipec. āā m. x. ter die.

15. A greenish-yellow fluid has continued to be thrown up, mixed with a tough mucus, the thinnest layer of which appears of a yellow colour. No discoverable hydatids. Pulse 105, less jerking. Stools less frequent, but of the same appearance.

Hydr. c. Creta, gr. ij. o. n.

20 The motions have gradually become coloured with bile, sputa much diminished in quantity, and there are some colourless mucous portions. Tongue cleaner. No perspiration. Pulse 80.

23. She expectorates much less, the matter assuming a more ordinary character. Parts of it only tinged pale yellow. At the angle of the right scapula, the voice proceeds from the chest, shrill and clear, almost amounting to ægophony. There are no bronchial sounds in the left lung. Respiration over the greater part of it puerile. Motions well coloured with bile.

Omitte Hydr. c. Cret.

28. The expectoration has been daily decreasing since last report, and within the last twenty-four hours the sputa have not amounted to a desert-spoonful: they are of a purulent character, not tinged with bile. The heart's action is moderated. Pulse 76, and soft. Respiration may now be heard below the right mamma, and the dulness on percusssion is diminished. The pectoriloquy is increased in intensity, but is much less clear. She gains strength and flesh, and has begged frequently to be allowed to get up, but Dr. Bright strictly enjoins rest and quiet.

Feb. 2. The sputa are now scanty and colourless, and there is no inordinate perspiration: tongue clean and moist: pulse quiet: bowels torpid, for which she has taken the house-medicine occasionally.

Applicetur Emplast. Ammoniaci c. Hydrarg. regioni hepatis.

7. She is convalescing rapidly: there is but slight cough, and the expectoration has ceased. Stools healthy. Pulse 76, small.

14. She looks well, is getting fat, and has no cough. She has obtained permission to get up for an hour daily.

22. There is still some gurgling below the right scapula, when she coughs; and at that time there is distinct pectoriloquy. Above there is good respiration, and normal resonance of the voice. The whole of the left lung is apparently healthy; and the respiratory murmer is to be heard over it, clearer than over the upper part of the right lungs.

March 1. Her health appears nearly established: she is active in the ward, and free from cough. Both sides of the chest appear symmetrical, and are equally expanded during inspiration. On the anterior part of the right side there is good resonance, upon percussion, as low as three inches below the mamma; and the respiratory murmur is distinct. The same may be observed of the posterior part, as far down as two incnes below the inferior angle of the scapula, where it is slightly duller than on the opposite side. At this space, and at the lower part of the axills, where dulness still exists, respiration is heard at a distance, and there is bronchophony.

6. There is again a gurgling to be heard on coughing, at the lower and posterior part of the right lung.

11. No change: but auscultation still gives evidence of a collection of fluid at the lower part of the lung.

14. The cough has now returned; and she has expectorated matter somewhat resembling the former. Portions of a yellowish colour are mixed with it, which become green on the addition of nitric acid.

18. The cough continues; with the expectoration, but in no great quantity, of a straw-coloured fluid, containing a membranous substance, appearing to be the part of a cyst, which is of a deeper yellow tint. Stools regular, and of healthy character. No complaint of pain or uneasiness.

22. She has coughed up since yesterday only about a dessert-spoonful of a thick mucus of a light-brown colour. The gurgling, upon coughing, is no longer heard; but when she takes a forced inspiration, there is a distant large crepitation at the spot defined, viz. at and a little below the angle of the scapula.

March 25. Having ceased to expectorate, she was sent into the convalescent ward; where she continued to improve in health, but occasionally raised a little mucus from the chest:—and, on

April 2. Was presented, looking remarkably well.

On the 8th she was visited in Holborn, and was free from cough: and the only symptoms of disease remaining were those afforded by the stethoscope; the moist crepitation being still to be heard, with some bronchophony over the space alluded to.

May 10. She was again seen.—She has become exceedingly fat. The crepitant rule is heard when she coughs, but less distinctly, and over a more limited space; the sound from which, on percussion, is nearly as good as on the opposite side.

Hemicrania Clavus supervening after Ague.

Reported by Mr. Benjamin Ridge.

William Knott, aged 41, a farm servant, has been accustomed to out-door labour for the last twenty years; and has always worked in marshy districts, near Chatham, Gillingham, and Upchurch. He had the ague five years ago, which continued off and on for three years; and was according to his statement, a *tertian*. When that left him, two years since, he was seized with swimming in the head, and dimness of sight. He never had ague-fits after that: but experienced a continued pain in the right side of the head, which was tender and sore on pressure: from that time it has gradually got worse, without any intermission, and has always increased at night. He was blistered and bled for it; and took pills, to make his mouth sore, but got no relief at all. He next tried a French quack, who (to use his own language) "salivated him most *properly*"; from which he experienced a little relief. Since that time he has had a severe pain in the left hip and thigh, extending to the knee; and has been always obliged to tie a handkerchief round it, as tightly as possible, to enable him to walk. He discontinued his work altogether about a month ago; and was admitted into the Clinical Ward on the 10th November 1835, under Dr. Cholmeley.

His present symptoms are, pain in the forehead, swimming of the head, a dull aching pain confined to the right side of the cranium, and a circumscribed pain in the centre of the parietal bone, pressure on which produces a sensation like a sharp instrument being driven in. Does not complain of headache internally. He has no appetite, and is much troubled at night with dreams and incubus. Tongue clean. Bowels generally open once a day. Pulse 60, and labouring.

Abradator capillitium, et applicentur Hirud. xvi. parti dolenti.

Nov. 11. Found great relief from the leeches.

Pul. Jalapæ gr. xij. sextâ quâque horâ.

Fiat incisio parti affect., et applicetur Argenti Nitras.

A bold incision was made across the circumscribed spot: some small anastomosing branches of the occipital and temporal arteries were divided, and allowed to bleed freely for a short time. Pressure was then applied, to stop them; and the next day, nitrate of silver, to keep the edges from healing; after which, a linseed-meal poultice.

12. Pulse 63, soft and quiet. Pain in the forehead gone. Bowels freely opened three times. Slept more comfortably than he has done for some time, having been free from dreams. The part close to and round the incision not so tender on touch.

Omitte Pulv. Jalapæ. Jul. Amm. Ac. ter die sum.

13. Bowels opened four times. Slept well. Pain in the head nearly gone: he only feels a soreness where the incision was made. Pulse 66, and full. Tongue clean.

Pulv. Jalapæ ʒss. statim.—Pergat.

14. The wound a little irritable; in consequence of which, he did not sleep so well. He feels much better, and his appetite is improved. Bowels not open.

Pul. Jalapæ ℈ij. Haust. Sennæ posteà.

15. Slept very well. Bowels opened three times: pulse 64, soft. Has no pain in the head, and very little where the incision was made. Feels very hungry. Has no incubus now, and does not dream at nights.

Iodinæ gr. 1-sixth. Potass. Hydriod. gr. v. Syr. Papav. ʒss. ex decoct. Glycyrr. ʒiss. ter die.

Mutton-chop.—Omitte Jul. Amm. Ac.

From this time, the pains in the hip, thigh, and knee, gradually got better: the Hemicrania was quite removed; and he was presented, perfectly cured, on the 27th instant.

(To be continued.)

THE MEDICO-CHIRURGICAL FORMULARY, OR PHARMACOPŒIAS OF THE METROPOLITAN HOSPITALS, FOR 1837;

With an Account of the Uses and Doses of all established and new Medicines, the recent additions of M. Magendie's Formulary, and of the new London Pharmacopœia, 1836.

By Michael Ryan, M.D.

Lecturer on the Practice of Medicine at the Hunterian School of Medicine, Great Windmill Street, &c. &c.

The unprecedented success of the *Practical Formulary of Hospitals*, two editions having been required during the last year; and the want of a portable work as an epitome of the Collegiate and Hospital Pharmacopœias, have induced me to attempt the arrangement of such a production. Its title shows, that there is no work of the kind in our language. It comprises more varied information than any other pharmacopœia, formulary, or conspectus hitherto published in one small volume. The best materials have been selected from all sources, both national and foreign. The *Medico-Chirurgical Formulary* is a pocket remembrancer for the student and busy practitioner. It is a manual of the most approved therapeutics. Its publication was delayed until the appearance of the *New Edition of the London Pharmacopœia*, so that the improvements in that work might be introduced. These are very numerous, and include nearly all the medicines lately discovered, and which will be found in the following pages.

A collection of the best prescriptions in medicine, surgery, and obstetricy, with an account of the uses and doses of all medicines now employed, condensed in the smallest possible space, will prove useful to every medical student and practitioner.

It differs from the *Practical Formulary of Hospitals*, by MM. Edwards and Vavasseur, containing a multiplicity of remedies, which, though used in other European nations, and also in America, are seldom, if ever employed in this country. That work is now popular in the Old and New World. It is one of reference, and ought to have a place in every medical library. The *Medico-Chirurgical Formulary* is a practical vade-mecum for constant reference, by those engaged in the practice of medicine in the British dominions.

Balneum Alcalinum.

℞ Potassæ Carb. ʒ viij; Aquæ Tepidæ q. s. Used as a revulsive in congestion of the brain, lungs superior and interior extremities in cases of children.

Balneum Acidi Hydrochlorici.

℞ Acidi Hydrochlorici ʒ ij; Aquæ Calidæ, q. s. Strong stimulant.

Balneum Acidi Nitro-Muriatici.

℞ Acidi Nitrici ʒvj; A. Hydrochlor. ʒix; Aquæ, q. s.; ad gratam aciditatem. Applied with a sponge over the region of the liver, thighs, legs, and superior extremities in chronic disease of the liver, and also employed as a manuluvium and pediluvium. It often acts as an aperient.

Balneum Gelatinosum.

℞ Gelatinæ lbss; Aquæ Bullientis Cong. vj. In cutaneous diseases accompanied by great irritation and itching; and also in cases of delicate and emaciated children as a nutriment. It is seldom used in either

case in the British dominions, except among the higher classes of society.

BALNEA IODURETA.

℞ Iodinii gr. ij.—iij.—iv.; Pot. Hydriod gr. iv.—vj.—viij.; Aquæ Oj.—Oj.—Oj. M. Used in lotions, collyria, fomentations to scrofulous tumours and ulcers and as injections into fistulous passages. It may also be sprinkled on a linseed-meal poultice.

BALNEUM SINAPIS.

℞ Pulveris Sinapis ʒ iv.; Aquæ Bullientis, q. s. M. Employed in cerebral and pulmonic diseases. Infants ought not to be immersed longer than five minutes.

BALNEUM SULPHURIS.

℞ Flor. Sulphuris ʒ ij.; Aquæ Tepid. Oc. The same proportion of sulphuret of potass may be used as a milder application. Vapour, douch, and various medicated baths are now generally employed in all the metropolitan cities.

BALSAMUM ACOUSTICUM.

℞ Olei Amygdallarum ʒ i.; Tinct. Opii ʒ i.; Balsam Peruv. m. v. A few drops to be poured into the ears, and a piece of lint or cotton introduced to retain them. This often relieves ear-ache in children, and particularly during dentition. See INJECTION.

BALSAMUM ANODYNUM.

℞ Saponis Albi ʒ v.; Opii Pulveris ʒ i; Camphoræ ʒ iij.; Alcoholis Rectif. Oiss.; Olei Rosmarini ʒ v. M. The opium and soap should be dissolved in the alcohol, and then the camphor and oil added; the vessel ought to be frequently shaken. This is used in chronic pains and flatulent cholic: a dessert spoonful is rubbed in frictions on the abdomen; and fifteen or twenty drops may be given in infusion of tilia Europea. It may be applied over the cheeks in face-ache, tooth-ache, and hooping cough with advantage.

BALSAMUM ODONTALGICUM.

℞ Olei Concret. Myristicæ Moschat. ʒ v.; Ol Guaiaci ʒ ij.; Ol Caryophill. ʒ j.; Opii. Pulv. Camphoræ āā ℈ ii. M. This composition is applied to caries of the teeth, and generally gives relief in a very short time. Pure Nitric Acid applied to caries of the teeth causing tooth-ache, will generally afford immediate relief, unless the nerve of the tooth, or those of the cheek are inflamed. It is most efficacious when the tooth is situated in the lower jaw, as the acid can then be applied to the whole of the diseased part; but this cannot be done when the teeth of the upper jaw are affected, or when the caries is on the side of a tooth and another in close contact with it. I was the proposer of this remedy. It is now generally used in caries of the teeth, and especially in cases of pregnant women and children. Extraction of a tooth ought to be avoided as often as possible. Carbonate Soda in powder placed in a carious tooth has also afforded immediate relief in recent tooth-ache.

BOLUS ANTHELMINTICUS.

℞ Hydrarg. Submur., gr. ij.; Artemisiæ Judiacæ gr. viij.; Camphoræ Pulv. gr. vj.; Confect. Rosæ g. s. Fiat bolus. One of these boluses may be given two or three times a week at bed time, varying the quantities according to the age and effect.

ALTER.

℞ Hydr. Submur. ℈ ss.; Artemisiæ Judiacæ, Corallinæ Pulv. āā ʒ ss.; Syrupi, q. s. Fiant boli octo, quorum sumatur unus, alternis diebus.

ALTER.

℞ Stanni Pulv. ʒ j.; Ext. Tanaceti, Jalapæ Pulv. āā ʒ j.; Syrupi, q. s.; in bolos xij.—xv. distribue, horum sumatur unus omni semihora in die. Both these preparations are used in cases of worms.

BOLUS ANTI BLENNORRHAGICUS. (VELPEAU.)

℞ Pulv. Cubebæ, ʒ vj.; Copaibæ Bals. ʒ ij.; Mag. Cal. q. s. In bolos xxxvi. divide, diebus duobus sumendos. A double dose is given for the first two days, and it is continued for a week.

BOLUS ANTI-PERIODICUS ET ANTI-NEURALGICUS. (MATERNITE.)

℞ Cinchonæ Pulv. ʒ v.; Rhei Pulv. ʒss.; Amm. Hydro-chlor. ʒ ss.; Syrupi q. s. In bolos x distribue, sumat j tertiis horis. These boluses are very much employed in intermittent fevers, neuralgic and periodical disorders, and generally with great success.

BOLUS ANTI-SCROFULOSUS.

℞ Barytæ Hydrochlorureti gr. xxx.; Confectionis Rosæ ʒ j. M.

Bolus Antispasmodicus. (Bally.)

℞ Castorei, Succini, Assafœtidæ, Valerianæ Pulv. āā ℈ j.; Syrupi q. s. In bolos granorum sex divide, quorum capiat vi—viij. in die. In neuroses, neuralgiæ, and hysterical disorders.

Bolus Antisporicus.

℞ Sulphuris Sublim. gr. viij.; Gelatinæ Saponis, gr. iv. Fiat bolus, mane nocteque sumendus. In obstinate cases of psora, a grain of the black sulphuret of mercury may be added.

Bolus Astringens. (Parmentier.)

℞ Catechu Pulv. gr. vi.—xij; Ext. Opii gr. ss.; Conf. Rosæ q. s. Fiat bolus, pro re nata, sumendus. In chronic diarrhœa.

Bolus Camphoratus. (H. Dieu.)

℞ Camphoræ, Pot. Nit., āā gr. xij.; Amyli Pulv., Syrupi, āā q. s. Sit bolus. This is administered from the fourth to the eighth day in low typhus, or typhus gravior.

Bolus Catharticus.

℞ Hydrarg. Subm. gr. ij.—iv.; Rhei Pulveris gr. iv.—vj.; Pulv. Aromatic gr. ij.—iv.; Confectionis Rosæ q. s. M. In cases of children from one to three years of age, a bolus may be given morning and evening if necessary.

Alter. *(Military Hospitals.)*

℞ Pulv. Jalapæ ℈ j.; Scammon gr. vj.; Mellis q. s. In bolos tres divide, j. tertiis horis.

Bolus Emmenagogus. (H. Italy.)

℞ Ext. Aloes gr. viij.; Ext. Sabin. gr. vj. In bolos vj. divide, capiat j. 3. horis.

Bolus Febrifugosus.

℞ Cinchonæ Pulv. ʒ ij.; Potassæ Nitr. ℈ j.; Syrupi q. s. In bolos iv. divide, capiat j. m. n.

Bolus Ferri Tartratis.

℞ Ferri Tartratis gr. x—xx.; Confect. Rosæ, ℈ j.—℈ iss. In bolos tres divide, capiat infans unum, omni mane. Employed in cases of delicate, feeble, scropulous, or rachitic infants, as a tonic: it also reddens the complexion. The tartrate, carbonate, or hydriodate of iron may be also administered in porter, ale, or sherry wine diluted, and is readily disguised in these fluids when prescribed for children.

Bolus ad Quartanum. (H. Dieu.)

℞ Cinchonæ Pulv. ʒ j.; Potassæ Carb. ʒ j.; Antim. Tart. gr. xvj.; Syrupi, q. s. Divide in bolos lx., in horis xxiv sumendos. Very much used in quartan agues in the French hospitals.

Cataplasmata. Ph. Brittanic.

Cataplasma Anodynum.

℞ Farinæ Lini, Farinæ Tritici āā p. e.; Aquæ Bullientis q. s., Tinc. Opii, ʒ ss.—j.—ij.—M. This poultice is very much used in inflammations accompanied by severe pain, in many foreign hospitals. When olive oil, fresh butter, or lard is added, the term emollient cataplasm is employed. It is sometimes used after the removal of leeches to increase the bleeding, and then without the opium.

Cataplasma Antisepticum. (H. Dieu.)

℞ Camphoræ ʒ ij; Cataplasm. Lini q. s.; Cinchonæ Pulv. ʒ iv. M. Employed successfully in simple and hospital gangrene.

Cataplasma Carotæ vel Rapi.

℞ Carotæ vel Rapi q. v. Coque in Aqua adaptam spissitudinem, dein contunde in pulpam, et addel Oei Olivæ Butyri vel Adipis recentis, ʒ ss. Applicetur calidum cum pannis lineis parti affectæ, et vesica suilla oleo madefacta detiniatur, et quolibet bihoris renovatur: ubi arescit tantillo, butyri insulsi emolliatur.

Cataplasma Discutiens.

℞ Farinæ Avenæ Sativæ ʒ ij; Fol. Conii Maculat recentis contusorum ʒ ij; Acidi Acet. com. q. s. Coque paulisper et adde Ammon. Hydrochlor. ʒiv. Fiat cataplasma, et extensum super pannam lineum duplicatum, vel quadriplicatum, parti affectæ applicandum, spiritu vini prius irroratum, et ubi exaruit iterum humectetur, renovetur quolibet trihorio, donec remittat, vel sopiatur dolor.

Cataplasma Effervescens.

℞ Farinæ Tritici q. v. Coque in Cerevisiæ infuso, (Anglice Malt-wort), ad debitam mollitiem dein firmetur laxe propter fermentationem. Employed in sloughing ulcers.

Cataplasma Fermentans.

℞ Far. Tritici ʒ iv; Spumæ Cerevisiæ, Anglice Yeast or Barm), ʒiij; Mellis ʒj. M. This is used in indolent or sloughing ulcers.

Cataplasma Carbonis.

℞ Cataplasm. Farinæ, vel Panis, ℔ss; Carbonis Pulv. ʒ ij. M. Employed in gangrene and unhealthy ulcers.

CATAPLASMA IODURETUM.

℞ Iodinii ʒ iv; Potassæ Hydriod ʒ j Aq. ʒ vi. Misce et adde Cataplasmatis Lini q. s. Applied very hot to chronic glandular swellings.

CATAPLASMA MATURATIVUM.

℞ Fol. Acetosæ, Fol. Betæ Vulg. āā ℥ j; Lilii Candidi No. j; tere in mortareo et adde Ung. Resinosi ʒ j. This is much used in Continental Europe to expedite suppuration.

ALTERUM. (H. OF GERM.)

℞ Saponis Albi ʒj; Micæ Panis ʒviij; Lactis vaccæ O j. Coque paulisper in usum. This is also used at the H. of Enfans to accelerate suppuration in phlegmonous abscesses.

ALTERUM. (PH. NOSOC. EDIN.)

℞ Micæ Panis q. v. coque in Aqua ad aptam spissitudinem et illinatur superficies oleo olivæ priusquam applicetur.

CATAPLASMA SINAPIS.

℞ Farinæ gran. Sinapis ʒ j.; Farinæ Lini, vel Tritici ʒ ij.; Aceti Com. q. s. Fiat Cataplasma. This ought not to be applied longer than three or four hours to adults, and no longer than three or five minutes to children.

CATAPLASMA SOLANI TUBEROSI.

℞ Solani Tuberosi q. v. in mortareo contunde ad debitam consistentiam. Employed occasionally in opthalmia, scalds, and burns.

CATAPLASMA SUPPURATIVUM.

℞ Cataplas. Emollient ℔ij; Ungenti Resinosi ʒ i. M.

ALTERUM. (PH. NOSOC. EDIN.)

℞ Catapl. Commuis ʒ j.; Alii Cepæ contus ʒ iss; Ung. Resinos ʒj. Fiat Cataplasma.

CERATA. PH. BRITTAN.

CERATUM CALMANS. (ROUX.)

℞ Aquæ Lauro-ceras ʒ ss; Cerati Simplicis ʒ j. M. Employed in painful and cancerous ulcers.

CERATUM OPIATUM. (H. DES ENF.)

℞ Cerat. Simpl. ℔ j.; T. Opii. ʒ j. M. For adults, Cerati ʒ iv.; T. Opii ʒ j.—ij.—iij. Used in excoriations, painful chaps and fissures, and venereal ulcers.

CERATUM BELLADONNÆ. (CHAUSSIER.)

℞ Ext. Belladon. ʒ ij.; Aq. Destillat. ʒ ij.; tere simul et adde Adipis ʒ ij. Employed with a syringe to dilate the os uteri, and for spasm of the sphincter ani in nervous subjects; spasmodic urethral strictures, iritis, and neuralgic pains in different parts.

CERATUM CAMPHORÆ. (H. DE LA MATERNITE.)

℞ Pulv. Camphoræ, Oxidi Zinci, āā gr. iij.; Butyri recentis ʒ iij.; Spermatis Ceti ʒ ij.; Ceræ Albæ ʒ iij. M. In tarsal inflammation, to prevent the eyelids from adhering during sleep.

CERATUM CANTHARIDIS. (H. DIEU.)

℞ Pulv. Canthard. ʒ j.; Aquæ ʒ xij.; Adipis ʒ vj; Olei Olivæ, Ceræ Albæ, āā ʒ iv.; Camphoræ ʒ ii. Boil the cantharides in the water for half an hour, filter and evaporate to ʒ v.; add the other substances, evaporate the whole of the water, let the medicine cool, and add the camphor. Employed to keep up the discharge from blistered surfaces without irritating the urinary organs.

CERATUM GOULARDII.

℞ Cerati Simplicis ʒ iv.; Plumbi Acet. Liq. vel Ext. Saturni ℥ xx. M. Applied to slight burns and indolent ulcers.

CERATUM HYDRARGYRI. (*H. des Ven.*)

℞ Ung. Hydr. Fort. ʒ ij.; Cerati ʒ v. M. Used in dressing venereal ulcers.

CERATUM QUINIÆ.

℞ Quiniæ Sulph. gr. vj.; Cerati ʒ j. M. Applied to a blistered surface in obstinate agues, when the stomach rejects quinine or cinchona.

CERATUM SULPHURIS.

℞ Cerati Simplicis ʒ iv.; Sulphuris Sublim. ʒ ij.; Olei Lavend. ℥ vj. Fiat Ceratum.

CERATUM TART. ANTIM.

℞ Cerati Simplicis ʒ ij.; Antim. Tart. ʒ ij.; Camphoræ ʒ j. M. Employed in frictions, twice or thrice a day, as a counter-irritant.

ALTERUM.

℞ Ant. Tart. ʒ j.; Adipis ʒ j.; Olei Crotonis Tiglii, ℥ vj—x. M. This succeeds when the former fails.

COLLYRIA.

COLLYRIUM AMMONIO-CAMPHORATUM. (WARDROP.)

℞ Liq, Am. Acet. ʒ ij.; Mist. Camphoræ ʒ vj. M. In weak watery eyes.

COLLYRIUM AMMON. C. CAMPH. (TRAVERS.)

℞ Liq. Amm. Acet., Aq. Rosæ, sing. ʒ ij.; Mist. Camph. ʒ j. Misce pro Collyrio.

ALTERUM. (SCARPA.)

℞ Acidi Aceti ʒ j; Sp. Tenuioris ʒ iv.; Aquæ Rosæ viij. In the same disease.

ALTERUM. (WARE.)

℞ Acid. Acetici ʒ iv.; Aq. Flor. Sambuci ʒ vj.; Sp. Rosmarini ʒ iij. Fiat Collyrium.

COLLYRIUM OPIATUM CUM CAMPHORA. (LAWRENCE.)

℞ Opii Ext. Mollis ϑ ss.; Camphoræ gr. vj.; tere simul et adde Aq. Bullient. ʒ xij. In chronic ophthalmia, with lachrymation and intolerance of light.

ALTERUM. (HUC.)

℞ Aquæ Destillatæ, ʒ viij.; Opii Ext. Mollis ϑ j. M. In ophthalmia, accompanied by great sensibility and lachrymation, in infants and children.

COLLYRIUM ALUMINIS.

℞ Aluminis Sulph. ϑ j.; Aquæ Rosæ, ʒ viij. M. In chronic conjunctivitis, and specks on the cornea, both in children and in adults.

COLLYRIUM ALUM. COMP.

℞ Liq. Alum. Com. Ph. Lond. ʒ ij.; Aquæ Rosæ ʒ viij.; Solut. Acet. Morphiæ, ♏ xx. M. In chronic conjunctivitis, with great intolerance of light.

COLLYRIUM ANOD. OPIATUM.

℞ Aquæ Fontis ʒ iv.; Solutio. Acet. vel. Mur. Morphiæ, ♏ xxx. M.

COLLYRIUM PLUMBI ACETATIS. (SIR A. COOPER.)

℞ Liq. Plumbi Acet. ʒ ss.; Aquæ Rosæ ʒ vj.; Liq. Opii Sedat. ʒ ss. M.

COLLYRIUM PLUMBI IODURETI. (RYAN.)

℞ Plumbi Iodureti ϑ j.; Aquæ Destillatæ ʒ vj.; Solutionis Morphiæ ʒ ss. In scrofulous ophthalmia.

COLLYRIUM POTASSÆ HYDRIOD. (RYAN.)

℞ Potassæ Hydriodatis ϑ j.; Aquæ Destillatæ ʒ vj.; Solutionis Morphiæ ʒ ss. M. In corneitis, with opacity.

COLLYRIUM OXYMUR. HYDR. (TRAVERS.)

℞ Hydr.-Oxymur. gr. ij.—iv.; Aquæ Destillatæ ʒ vj. M. In syphilitic and scrofulous ophthalmia.

COLLYRIUM ZINC. SULPHAT.

℞ Zinci Sulph. gr. iv.; Aquæ Rosæ ʒ iv. M.

COLLYRIUM ZINC. SULPH. C.

℞ Zinci Sulphatis gr. xvj.; Aquæ Rosæ ʒ vj.; Liquoris Opii, ʒ ss. M.

COLLYRIUM CUPRI SULPHATIS. (WARE.)

℞ Cupri Sulphatis gr. iv.; Misturæ Camph. ʒ iij.; Aquæ Rosæ ʒ iv. M.

COLLYRIUM CUPRI SULPH. (GUTHRIE.)

℞ Cupri Sulph., Bol. Armen., āā gr. viij.; Camphoræ gr. ij.; Aq. Fervent. ʒ viij. M. In opacity of the cornea.

COLLYRIUM CUPRI ACETATIS.

℞ Cupri Acetatis gr. viij.; Liq. Opii ʒ ij; Aquæ Rosæ, ʒ viij. Fiat Collyrium. In chronic ophthalmia.

COLLYRIUM ZINCI IODATIS. (MAUNOIR.)

℞ Zinci Iodatis gr. iv.; Aquæ Destillat. ʒ vj. M. In scrofulous ophthalmia.

COLLYRIUM ZINC. SULPH. C. CAMPH. (LAWRENCE.)

℞ Zinci Sulph. gr. xv.; Camphoræ ϑ ss.; Aquæ Bullientis ʒ vj. Fiat Collyrium.

COLLYRIUM SICCUM. (DUPUYTREN.)

℞ Tutiæ pp., Sacch. Cand., Hydr. Subm. āā p. e. In pulverem subtilissimum redige, et debita dosi tubulo plumeo in oculum insufflandum. There is another preparation at the Hotel Dieu and H. des Vens., composed of 2 parts of Oxyde of Zinc, 1 part red Oxyde of Mercury, and 14 parts of White Sugar.

ALTERUM. (CULLERIER.)

℞ Sacch. Cand., Tutiæ, Potassæ Nitrat. āā p. e. M. A small portion of this powder is blown into the eye by means of a quill, in opacities of the cornea and chronic ophthalmia.

ALTERUM. (H. ET ANT.)

℞ Hydr. Subm., Sacch. Pulv. āā ϑ j; Opii gr. iv. M. These preparations are seldom used in this country.

CATAPLASM. OPHTHALMICUM.

℞ Alum. frustrum in ovorum duorum Albuminibus agita, ad unguenti consistentiam, dein intra linteum tenuiorem duplicatum extende, et tepide admove, renovendum cum exsiccatum fuerit. (Riverius.)

COLLYRIUM STRYCHNIÆ. (HENDERSON.)

℞ Strychiniæ gr. ij.; Acidi Acetici Dil. ʒ j.; Aquæ Destillatæ ʒ j. M.

Hujus instillentur ♏ iij. inter palpebras semel vel bis in die.

Unguenta Ophthalmica.

℞ Cerati Calaminæ ʒj.; Ung. Cetacei ʒj.; Fiat unguentum, cujus pauxillo illinat æger palpebras, h. s. cubitum iturus.

Alterum. (Wishart.)

℞ Tutiæ ʒj.; Ung. Cetacei ʒj. Employed as the former to prevent the gluing together of the eyelids in tarsal inflammation.

Ung. Hyd. Nit. Dilut.

℞ Ung. Hyd. Nitrat. ʒiv.; Adipis ʒvj. M. Used for the same purpose in scrofulous subjects.

Ung. Argenti Nitrat. (Guthrie.)

℞ Argenti Nitrat. gr. x.; Ung. Cetacei ʒi.; Liq. Plumbi Acet. m. x. Misce. Employed in purulent, blennorraghial and catarrhal ophthalmia; a small portion about the size of a pin's head being introduced between the eye-lids. Very much used at the Royal Westminster Ophthalmic Hospital.

Ung. Plumbi Iodureti.

℞ Plumbi Iodureti ℈j.; Adipis ʒj. Misce. In strumous tarsal ophthalmia.

Ung. Zinci Sulph. (Scarpa.)

Zinc iSulphatis ʒj.; Adipis ʒj. Misce. Hujus pauxillum, ope penicilli camelini oculo affecto applicetur, mane et nocte. In venereal tarsal ophthalmia.

Electuarium Pectorale.

℞ Flor. Sulphuris, Croci Orient, Ext. Sambuci, Ext. Glycyrrhizæ āā ʒij.; Mellis ʒiv. Dosis Molis Nucis ter quaterve in die. Employed in chronic catarrhs.

Emplastra. (Ph. Brittan.)

Emplastrum Belladonnæ. (Swediaur.)

℞ Suc. recent. Belladon, Olei Lini āā ʒiv.; Ceræ Flav. ʒiij.; Terebinthinæ ʒiij.; Pulv. Belladonnæ ʒj.; F.S.A. emplastrum. Sedative emollient and resolvent, applied to chronic glandular swellings of children and adults. Plaisters of Conium and Hyoscyamus are prepared in the same manner. A drachm of Ioduret of Lead is some times added to four drachms of any of the preceding plaisters.

Emplastrum Belladonnæ.

℞ Emplastri Resinæ ʒiij.; Ext. Belladonnæ ʒiss.; Emplastro, calore balnei aquosi, liquefacto extractum adjice et misce.

Emplastrum Calmans.

℞ Opii Puri, Camphoræ āā ʒss.; Empl. Lytharg. ʒij.; Misce. Applied in lumbago and pains in the back from uterine, ovarian or renal disease.

Emplastrum Resolvens. (Hufeland.)

℞ Ung. Althæ ʒj.; Fellis Taurini recentis, Saponis Venet āā ʒiv.; Olei Petrolii, Camphoræ Pulv. āā ʒj.; Fiat emplastrum secundum artem. Applied to white swelling of the knee and other joints.

Emplastrum Antim. Tart.

℞ Picis Burgund. p. iij.; Ceræ Albæ p. 1. Fiat emplastrum Antim. Tart. gr. vj. inspergatur.

Emplastrum Roborans. (Swediaur.)

℞ Oxid Ferri Rub., Picis Burgund. āā ʒss.; Olei Oliv. q. s. Opii ℈ij. M. Applied in cases of weakness or pain in the back or loins.

Emplastrum Vermifugum.

℞ Aloes Socotrinæ ʒj.; Olei Anthemidis, m. vj.—x.; Terebinth. Venet. q. s. Fiat emplastrum, abdomini applicandum.

Confectiones Ph. Brittan.

Decocta Ph. Brittan.

Decoctum Sarsaparillæ Comp. (O'Beirne.)

℞ Rad Sarsaparillæ Jamacens. concisæ ʒiv.; Rad. Glycyrrhizæ ʒss.; Liq. Calcis Oij. Macera per horas viginti quatuor in vase vitreo optime operculato, et in loco frigido et ob-obscuro; dein cola in usum. Sumat hujusce dimidium, partitis vicibus quotidie. I have given a full account of the superiority of this formula in in my translation of the *New Practical Formulary of Drs. Edwards and Vavasseur*. 2 Edition, 1836, p. 266.

Decoctum Artemisiæ Judiacæ.

℞ Artemisiæ Judiacæ ʒiv.; Aq. Ferventis Oij. M. Used in the same manner as the decoction of Coral line in cases of vermination.

(To be continued).

THE NEW LONDON PHARMACOPŒIA,

We are happy to announce to our readers that the New London Pharmacopœia is brought down to the present state of science, and contains almost all the new remedies of established efficacy; a new nomenclature with several new formulæ. We shall place all these improvements before our readers in our next, and the following number, in the Medico-Chirurgical Formulary for 1837.

INTERCEPTED LETTER.

THE MEDICAL WITNESSES BILL.

Dear M.— The bungling manner in which your attacks upon subordinates have been carried on, under the shield of the Medical Witnesses' Bill, has very much annoyed me; I cannot, however, help feeling some little sympathy for you and poor C—, for the severe cutting up that rascally "Lancet" has subjected you to. I remember reading, some time since, that Voltaire has imagined a final retribution which consists in placing the injured before the injurer, as evidence against him, he considers the shame that would overwhelm the injurer would be a sufficient torment. It was unfortunate that your own words should have been brought in judgment against you, for though you prudently withhold your name from the public eye, it is pretty well known that you and C. manage the thing between you.

I am afraid the exposure in the "Lancet" will injure the character of our publication, for I must confess it places your veracity in a very doubtful point of view; however, we must bear up under the misfortune as well as we can. But a few words about the manner in which you so incautiously proceeded in this affair. Why, if you had looked at the letter you first published, and the one you fabricated with the signature of "Chirurgicus," you would have found they were no proofs of the inefficiencies of the new bill, for in neither case, had the supposed writer complied with the law as plainly laid down, you might be sure that Wakley would have detected this *oversight* of yours in a moment. Again, you said, medical men were beginning to know the *value* of the bill; now though this was used as a sneer, I fear it was not good policy to bring in these words, for they opened a way for our own motives to be enquired into, and people will naturally say, "Why the reason they attacked the bill, was because it was likely to be beneficial—or because it had become so. Supposed cases, like that signed "Chirurgicus," require a good deal of ingenuity to be made to appear true; and such concoctions as you have printed from some place in Norfolk and elsewhere, only show how weak our point is, and how silly are our correspondents. The string of testimonials in favour of the bill, published in the "Lancet" would have never appeared but for our opposition, this was a proceeding, however, none of us could foresee. It would be better for you to say as little about the bill, for the future, as possible. I will write you again shortly.

your's, H. H.

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ROYAL

THE

London Medical and Surgical Journal.

No. XIX. SATURDAY, JANUARY 7. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. IV.

Respiration [*continued.*]

Stimulus to Inspiration.—Mechanism of Inspiration. — Muscles employed in it. — Nerves which put the Muscles in action.—Seat of the primary Irritation.—Effect of cutting the different Nerves.—Cause of the violent effects of a blow on the Stomach.—True theory of Spasmodic Asthma.—Division of the Par Vagum.—Different explanations of its effects.—Physiological view of Sneezing, Coughing, Gaping, Hiccough, and the first Inspiration of newly born Infants.—Source of the pleasure in Snuff-taking.—Limited influence of the Will on Respiration.—Elasticity of the Costal Cartilages.—Articulation of the Ribs.—Force of the Intercostal Muscles.—Effects of their fibres being oblique.—Action of the Diaphragm in Inspiration.—Great Weights supported by the Chest.—Early theories of Respiration.—The Lungs viewed as a Gland.—Structure and Termination of the Bronchial Tubes. — Pulmonary Air Cells. — Lobes of the Lungs.—Structure and Peculiarities of the Gastro-Pulmonary Mucous Membrane.—Cavity of the Pleura.—Bad consequence of Pleuritic Adhesions.—Turgescence of the Venous System in Inspiration.—Reason why the Brain rises in Expiration. — Mechanism of Respiration in Diving Animals.—Effects of the Foramen Ovale being open. — Experiments with newly born Animals.—Balance of Expirations and Inspirations.—Effects of either predominating. — Physiological effects of Speaking, Sighing, Depressing Passions, &c.—Passage of the Air into and out of the Lungs.—Cause of Puerile Respiration.—Infanticide.—Different tests of Respiration having taken place.—Convolutions of the Trachea in Diving Birds.—Effects of Respiration on the Oxygen and Nitrogen Inspired —Mode of drowning a Fish —Different Theories on the Changes which the Air and Blood undergo in the Lungs.—Effects of Atmospheric Air, and of a Vacuum, on Venous, and on Arterial Blood.—Carbonic Acid viewed as a Secretion.

I. *Inspiration.* We must first enquire what is the stimulus to this action in man. It appears to be the irritation of the capillary arteries of the lungs, by an accumulation of venous blood. This, again, acts by sympathy on the brain, and from it a stimulus is conveyed to the nerves which move the intercostal muscles. In reptiles this stimulus may be carried to the muscles of the jaw, for the *par vagum* and the *portio dura* belong to the same respiratory system. The muscles employed in an *ordinary* act of inspiration, are generally few, being only the intercostals and the diaphragm, and in a *forced* act of inspiration, the other muscles are called into action in the following order, according to the intensity of the act: the *sterno-cleido-mastoid;* the *trapezius;* the *serratus magnus anticus;* the *scaleni;* the *cervicalis descendens;* the *levatores costarum;* the *serrati postici superiores;* the muscles of the eyes, face, throat, &c. Charles Bell says, that a post-horse, when panting, has the muscles of the abdomen, throat, and nostrils in action, as well as those of the ribs. These are put into action by the different nerves, according as they sympathize with the ganglionic system, which is first irritated. The muscles are called into action by the nerves in the following order: the intercostal muscles by the intercostal nerves; the diaphragm, by the phrenic nerve; the sterno-cleido-mastoid, and trapezius, by the spinal accessory nerves; the serratus major anticus, and the scaleni, by the external respiratory nerve. The sterno-cleido-mastoid and serratus major anticus, can only act in respiration when the trapezius is in action to fix their

other insertions. Then the levatores costarum, the serratus posticus superius. and the cervicalis descendens, by the spinal accessory nerve; and the muscles of the eyes, face, and throat by the pathetic nerve, the fascial nerve, &c. In ordinary respiration we are not more sensible of any stimulus in the lungs, than of a stimulus in the heart in ordinary circulation; but it is not the less real. If we hold our breath for a little while, we shall be certain that the primary irritation is in the lungs, as that of hunger is in the stomach. Charles Bell found that on stopping the nostrils of an ass for a time, the blood accumulated in the lungs, and the stimulus was conveyed by the *portio dura* to the nostrils, which heaved violently. On cutting the *portio dura* on one side, the nostril on that side did not move, but the other continued to dilate. If the spinal accessory nerve be cut, the trepezius is prevented from participating in respiration; and cutting the phrenic excludes the diaphragm. If we cut the *par vagum* the actions of all these muscles are cut off at once; for it conveys the primary stimulus.

The *tuber annulare* has been called, "The citadel of life," for if that be not involved, life will continue after great injuries have been sustained by other parts of the brain. A blow on the stomach produces its violent effects, from the violent stimulus it gives to the respiratory nerves. Spasmodic asthma, I think, is owing to disease of the *par vagum;* which should convey the stimulus of inspiration to the intercostal muscles; for asthma may be at once produced in animals by cutting the *par vagum.* The fatal effect of cutting this nerve is attributed by some to its influence on the *lungs*—by others to its influence on the *heart,* and by others to its influence on the stomach. The first opinion is the most probable. Dr. Holland says, that cutting this nerve produces death by closing the *rima glottidis,* but the *par vagum* gives off both the superior laryngeal, and the recurrent nerves, which supply the muscles both for opening and closing the *rima glottidis,* so that cutting the whole nerve could not close the glottis, as it would only palsy antagonist muscles.

But to whatever part of the system the original irritation is applied, other parts of the system participate; as sneezing from the stimulus of snuff to the nostrils, or of light to the eyes. The pleasure experienced from taking snuff, is from the general stimulus it imparts to *all* the respirating nerves, from the stimulus applied to *one part.* This pleasure is quite independent of the smell. Some persons cough if one tickle the *meatus auditorius externus.* Both sneezing and coughing depend on the stimulus, in all the three cases we have mentioned, being applied to the *portio dura.* If a current of air blow on the face, or drops of water be sprinkled on it, gasping is produced by the *portio dura* being stimulated, and then the diaphragm and other muscles concerned in gasping, being stimulated by sympathy. The first inspiration in the new-born infant, is caused by the stimulus imparted to the *portio dura,* by the cold air acting on the cheek. On the same principle hiccough may be stopped by stimulating the *portio dura,* by a slap on the face. If we try to raise the sternum by means of the sterno-cleido-mastoid, the other muscles of respiration participate, though not engaged in raising the sternum. This takes place from the *portio dura* participating in the irritation which you apply to the spinal accessory nerve; for you cannot prevent the nostrils dilating, at the same time that the sternum is raised. In snuffing violently, the sterno-cleido-mastoid muscles swell.

Our will has but limited influence on respiration, for if we take a forced inspiration or expiration, no effort of the will can continue it beyond a certain space of time. The elasticity of the cartilages of the ribs prevents their being broken by any shocks they receive; for in age, when the ribs become complete circles of bone, every violent blow causes fracture. For the same reason, an acceleration of respiration is more easily effected in youth. Young people breathe most by the intercostal muscles, and the old by the diaphragm.

Had the ribs been articulated in a straight line with their extremities, whether they were raised or depressed, the width of the chest would have been *diminished;* but as their middle is lower than their ends, the raising of the ribs *enlarges* the chest. It was said by one author that the intercostal muscles act with a force of thirty-two thousand pounds; but, these computations are very fallacious. The obliquity of their fibres, does not *increase,* but *diminishes* their power. If the course of a fibre deviate forty-five degrees from a right angle, it loses half its power; as is shewed by *one weight* hanging perpendicularly, balancing *two weights* (each as heavy as itself) suspended by ropes at an

angle of forty-five degrees. If the moving power of a barge on a river be applied directly ahead, the greatest effect is produced; if the power be applied at right angles, the barge stands still; and midway between *full* power and *no* power must be *half* power. But an oblique muscle does not lose half its *length*, in raising the rib half way to another rib, as a straight muscle would have done. Hence it gains in extent of motion, what it loses in power. The gain of the intercostal muscles, from the obliquity of their fibres, is stated by Monro to be as thirty-five to twelve, as compared to straight muscles. They gain also in *celerity* of motion, and in diminution of fatigue.

Magendie states that the diaphragm may assist in raising the ribs; by pulling at its attachments, which are the lower ribs. But as it has a tendency likewise to draw the ribs inward, this neutralizes the other tendency; for the ribs cannot be raised without being pushed outward. But even if the diaphragm *could* raise the ribs, in the way supposed, we should gain no additional space; for in proportion as the ribs are raised, the diaphragm is prevented from descending to so low a level as it otherwise would.

A man allowed an anvil weighing six hundred pounds to be placed on his chest; and a heavy bar of iron to be beaten out on it. In these circumstances he must have breathed by the diaphragm. Galen was mistaken in supposing that the internal intercostals are muscles of *expiration*. The early physiologists thought the lungs were enlarged by means of the tendon of the diaphragm. Williams, of Liverpool, says that the lungs are not quite passive in respiration; for when the chest is opened, the lungs heave, from a motion of the bronchial fibres. It is a controversy whether Mayow or Monro (Secundus) pointed out the proper function of the intercostal muscles. Mayo hinted at it; Monro particularly explained it.

The highly philosophical view of the lungs being a gland, is in favour of allowing the trachea to have muscles; for no one doubts that the excretory ducts have muscular fibres. As the bronchial tubes diminish in size, they lose their cartilages first, and then their muscular coat; so that at their blind extremity, they have only a mucous coat; and the thickness of this is said to be only the thousandth part of an inch. According to Reissiessen, each bronchial tube terminates like an umbel. Malpighi, Monro (Secundus), Stone, and Magendie, say, that cells exist in the lungs; but they were probably made by distention. Monro does almost the same thing as deny their existence; for he says that the terminations of the bronchia are more than the hundredth part of an inch in diameter; while the diameter of the pulmonary air-cells, is between the ninetieth and the hundredth part of an inch in diameter. These dimensions bring us very nearly to the same thing.

The lobes of the lungs are generally more in number in the rest of the mammalia than in man. The mucous membrane which lines the air passages is, as elsewhere, a semi-tranparent, inelastic veil. One of its surfaces is smooth and lubricated; while the other is rough. The latter has never any fat, either in this part of the body or any other; or a fat man would be liable to stricture in the ducts of every organ of his body. It forms part of the gastro-pulmonary mucous membrane; and no doubt this tissue presents a much greater area than any other in the body; so that although the doctrine of all diseases originating in the mucous membrane, may be a *mistaken* view, it is any thing but a *circumscribed* one.

Although the two layers of the pleura are always in contact, yet it is not the same points of each that are so, for the two surfaces glide on each other, at every act of respiration. Adhesions, therefore, between the two surfaces, are inconvenient; and it must be absurd to promote them by injections into the sac of the pleura, as has been recommended in some cases of diseased lung. This experiment was tried on a pig, by a living professor, who says it would probably have succeeded, *if the pig had not died*. The most expansive or dilatable part of the lungs, does not correspond with the most dilatable part of the chest.

There is a much greater turgescence of the right side of the heart, and of the system of the *vena cava* during *expiration*, than during *inspiration*. This is seen very evidently in diseases of the heart, if we watch the veins of the neck, and it is the reason why the brain rises in expiration. In the seal, and some other diving animals, there is a pouch to provide a receptacle for the blood, and thus prevent asphyxia. Vesalius thought the primary object of inspiration was to uncoil the pulmonary vessels, which had been corrugated by expiration. In his time

there were stories, too, of divers who could not be drowned or strangled, owing to the *foramen ovale* being open, thus making the lungs a very superfluous appendage. In reptiles the blood will pass through the heart several times, without going through the lungs. Hence, Buffon thought, that by causing puppies to be whelped in warm milk, the *foramen ovale* would be kept open, and thus the puppies would be rendered amphibious. Probably an open state of the *foramen ovale* does prevent asphyxia for a while, for newly-born animals can remain longer under water, than if older. Why, then, does not the *foramen ovale* remain always open? It would have rendered a mixture of the two kinds of blood too common, for this occurrence would have taken place during coughing, and every impediment to respiration. Such a state of matters would be very prejudicial.

There is a rush of blood to the lungs during *inspiration*, and to the heart during *expiration*; and as the functions of the body are more dependent on the heart, they will be more vigorous during expiration. If the expirations preponderate over the inspirations, the functions of the body and of the mind, will be above par. In speaking, the expirations much preponderate, for, when so engaged, we *inspire* only by jerk, taking up as little time about it as possible. Speaking, therefore, is a healthy occupation. Continued sighing is very *unhealthy*, for in it the *inspirations* preponderate, and this diminishes the frequency of the pulse, the heat of the body and the vigour of the mind. This is best seen in the cold stage of fever. For the same reason, in melancholy, the inspirations predominating, the mental and bodily powers are depressed. Physiologists have erred in regarding expiration as a mere fag end of the process. Charles Bell looks upon it in that light; but I shall be able to shew that the contrary is the real state of the case. The lungs always contain *some* air. The quantity remaining after a natural expiration is differently stated, from sixty cubic inches (by Cuvier), to two hundred and ten (by Bostock).

Persons while speaking, are probably occupied for fifty minutes out of the hour in expiration, and only ten minutes in inspiration. The following circumstances are attended by a preponderance of inspirations: 1. Sleep. 2. The first rising from bed. 3. Exposure to cold. 4. Long fasting. 5. Depressing passions. 6. Want of exercise. It occurs more frequently in males, in old persons, in phlegmatic temperaments, and in winter. Expiration is so well provided for, that it is never difficult, and hencewe conclude that no provision was necessary; and, in fact, that it is not provided for at all.

The quantity of air taken into the lungs at one inspiration is stated at from thirteen cubic inches (by Davy) to forty (by Bostock). If we take Dr. Bostock's computation, the quantity of air received at each inspiration is one-seventh of the total quantity in the lungs, and will probably not be voided till the sixth or seventh expiration afterwards; if we inspire and expire twenty times in a minute, the whole quantity of air in the lungs will be renewed about three times in that space of time. The air inspired probably remains some time in the bronchia as a reservoir, before it comes in contact with the venous blood. During one half of the time, the air is probably on its way *to* the air-cells, and, during the other half, on its way *from* it. We are entirely ignorant how the two currents of of air, (the *inspired* in its way *in*, and the *expired* on its way *out*,) pass each other without intermixing. We can only presume that it is a vital process, not analogous to anything out of the body; the fresh air may, perhaps, pass through the expired air as through a tube, in the same way as new food passing into the stomach, gets into the middle of the food already there. Air forced into the lungs artificially may be squeezed out, but if received naturally cannot. This indicates that, in the latter case, it is retained by a vital process. If half the lungs are impervious, their capacity as a reservoir is diminished, and therefore the air received into them at each inspiration bears a greater proportion to the rest. It thus passes to the air-cells in half the time, or with double the velocity, and, probably, this gives rise to puerile respiration.

Owing to the expansion of the air-vessels by respiration, the lungs are *specifically* lighter, though *absolutely* heavier, after birth than before it. But this is found to be liable to several fallacies, arising from the following circumstances: —1. Putrefaction; 2. Emphysema; 3. Inflation; 4. Inspiration in the uterus or vagina. It is said that the lungs have sunk in water, even after respiration has occurred before death. This may have arisen from the *foramen ovale* remaining open for a few moments after birth. If the lungs are putrid the other parts of the

body will be much more so ; and if the air in them be the consequence of emphysema, or of artificial inflation, it may be squeezed out. Part of the lungs may have been diseased, or not wholly expanded, and then they will sink ; in this case you must cut off a part, and try whether it will swim.

The *absolute* weight of the lungs, as a test of having been born alive, was proposed by Ploucquet. He states that if the child was still-born the lungs will weigh an ounce and a half; while if it has breathed they will weigh three ounces. This rule, however, presents varieties too great to allow its being depended upon. Daniel's test is the increase of volume of the lungs ; but this, likewise, is very variable. It is said that mothers have been hanged for killing their infants, when they were really still born, but had had their lungs inflated artificially by the mother, in the hope of restoring animation.

It is probable the lungs will continue to perform their functions for about one-sixth of a minute after respiration has ceased, as that time will elapse before the air taken in is vitiated. Many diving birds have the trachea vitiated under the sternum, to form a reservoir for the air, to be used when under water. In them the new air taken in at each act of inspiration will probably be only the one-twentieth or the one-thirtieth part of the whole quantity contained in their respiratory apparatus ; in them respiration may be intermitted for a minute or a minute and a half. The function of respiration does not cease simultaneously with its mechanism ; respiration and the circulation of the blood are mutually dependent on each other ; but respiration is much more dependent on the circulation, than the circulation on respiration.

The *expired* air contains as much nitrogen as the *inspired* ; but has lost some of its oxygen, the latter being replaced by carbonic acid, in quantity exactly sufficient to account for the oxygen that has disappeared. If a fish be put into water which has been deprived of its oxygen by boiling, it dies, for it is quite as possible to drown a fish as a man. A portion of the nitrogen of the inspired air is probably absorbed likewise in the lungs. Pure oxygen is said to have caused ulceration of the air-passages ; and in an undiluted state it is not capable of supporting respiration ; it is not accurately determined whether the venous blood throws off carbon alone or carbonic acid. The broad facts of the conversion of venous into arterial blood have been known ever since the time of Galen, for his "*subtle spirit*" was exactly analogous to oxygen.

Priestly found that black blood became red if tied up in a common bladder, while the membrane which lines the terminations of the bronchial tubes is said to be only the thousandth part of an inch in thickness. Some think that all the oxygen which disappears is absorbed by the nascent arterial blood. Le Grange thinks that only half that quantity is absorbed, forming carbonic *oxide*, and that this coming again to the pulmonary air-cells, forms carbonic *acid*. The most ancient opinion is that none at all is absorbed, but that it forms carbonic acid at once by union with the carbon of the venous blood. There are always oxygen and carbon in venous blood, but we do not know whether carbonic acid exists in it already formed, or whether that formation takes place in the lungs. Carbonic acid is given out from venous blood *in vacuo*, but then the chemical properties of the blood may be altered by this removal of pressure. Duncan showed that when blood coagulates under the ordinary pressure of the atmosphere, it gives out no carbonic acid.

Again, it is said that an animal *expires* carbonic acid after it has ceased to *inspire* oxygen ; but there is enough of air always remaining in the lungs to effect this ; but the best argument is, that the blood of the mother performs the same office in the placenta to the blood of the fœtus, as the water does to the gills of the fish; and as the latter dies if there be no oxygen in the water, we may presume there must be oxygen in the arterial blood of the mother. This is a fair analogical argument, but it is not conclusive. It would be curious to ascertain if carbonic acid exists in the uterine veins of the pregnant woman ; perhaps, however, all these theories are too strictly chemical.

I think all the oxygen of the inspired air is absorbed, for the absorption of everything is very rapid in the lungs ; they are furnished with three sets of vessels for absorption, veins, arteries, and lymphatics, while there are only two sets in other parts of the system, veins and lymphatics. But all this does not prove that carbonic acid is formed by the mere union of oxygen and carbon, and that this is the cause of the change of venous into arterial blood. I consider the car-

bonic acid to be a proper secretion. By inclosing a portion of an artery between two ligatures, Hunter found that the blood it contained assumed, after a time, a venous character, and the same thing occurred when arterial blood was inclosed in tubes, so that the lungs are not essential to this change.

A SUCCINCT TREATISE

ON

MEDICAL REFORM FOR IRELAND,

Embracing Improvements in Etiology, or in the Knowledge of the relative Agency of the concurring causes of its Epidemic and Pestilential Diseases, with a View to Preventive Measures, and Improvements in Pathology, or the Application of the Disjecta Membra of the rival Systems of Fluidism and Solidism, to form one more Perfect than either, with a view to Remedial Measures.

By William Stoker, M. D.

Honorary Fellow of the King and Queen's College of Physicians in Ireland, and of the London Medico-Botanical Society, Member of the Surgical Society of the Royal College of Surgeons in Ireland, &c. &c.

"When the mind shall be obliged to observe facts which cannot be reconciled with opinions, it will be evident that such opinions are ill-founded, and they will be laid aside."—*Morbid Anatomy by Matthew Baillie, M. D., &c. &c.*

On entering under peculiar circumstances, probably for the last time, upon departments of physical inquiry, in which I have been engaged much the larger portion of a long life, apart from, and heedless of professional cabal, party intrigue, and political hate by which, notwithstanding I have been severely injured, I beg to make a few preliminary remarks to explain my objects, and to obviate some prejudices of my professional brethren, by some of whom my previous efforts have been unexpectedly, because I think, unjustly opposed. Whether those prejudices wore the tints of *orange* or of *green*, they did me equal injustice, for I viewed the public interests through a more cool and sober medium than either, and relatively to objects which made neutrality a virtue.

An imperative sense of public duty, not self-sufficiency, first compelled me to undertake such tasks, and the same feeling subsequently dictated that I should not, without a struggle, abandon so important a position. Moreover the aid I soon received, and the quarters from whence it came, further confirmed the importance of that position, and my resolution to defend it.

I never proposed to form a new medical code. To abolish tested improvements in the knowledge and treatment of Epidemics, (one of the subjects I am about to enter on,) is a proposition at variance with that which the exigencies of hospitals devised for the prevention and cure of epidemic fevers and pestilential diseases, first led me to promulgate, and afterwards to maintain. It would be equally so to detract from recent improvements in pathology, another subject which I intend touching upon.

While in the former case I insist on those benefits conferred by the father of rational medicine and his disciples in ancient times, and by Sydenham's philosophic history of epidemics in modern times, I hold that both are necessary to sound practice, and have maintained their rank in the intervals of theoretic revolution. These improvements, interwoven as they are with the habits of the best practitioners, were derived on the one hand from just estimates of the relative urgency of exciting causes of epidemic diseases, such as famine or general destitution, compared with miasm arising from the bodies of the sick, or atmospheric distemperature; and, on the other hand, from discoveries of morbid changes and consequent morbid actions in the living organs and in the vital fluid, as causes of the symptoms before, and of the appearances found after death. I do not expect that the practice of physic can be advanced in any other way: and the new lights, which anatomy and chemistry have thrown upon the science of medicine, cannot fail to bring it to that point of perfection, towards which I have ventured to be an humble pioneer in order to smooth the advance of those who are to come after me.

Awakened attention to medical statistics, the application of microscopes of great additional power, discovering the origin of vital actions in the fluids, with interruptions of those actions as the true causes of disease, and the valuable additions made to morbid anatomy, promise to raise medicine and surgery from the class of conjectural arts to their legitimate rank, where, susceptible of the advantages of induction from experience, their progress, like that of kindred sci-

ences, will be progressive and constant, and their professors, no longer drawing in different ways injurious to the public, and to themselves, will attain that distinction which their quarrels and adverse practice have alone prevented.

I may here, as on similar occasions, observe the arts, or rather the sciences of Medicine and Surgery are so intimately connected, and mutually dependant, that it may be said the life blood of each flows into the body of the other: "Si fratrem Pollux alterna morte redimet." And even where their distinctness seems most obvious, they can be but considered but as different branches from the same root, which humanity planted to assuage the sufferings of mankind. I could not, of course, be supposed in contempt not more of my own 'order' than of the truth, to deny the obvious advantage of the division of labour, or the immense benefit which a science so complex and extensive as the cure of the infinite variety of bodily diseases, must receive from the distinctions in *practice* of the Surgeon and Physician; but he who is to become eminent as either, must well understand the principles of both, for however the practice may differ with its object, the principles are the same; just as in the simple and mixed sciences, we see the great assistance which astronomy has derived from the several labours of those who devoted their lives to the advancement of her component sciences; yet, before these several enquirers can attempt to advance their separate studies of trigonometry, or optics, or mechanics, each must begin at the root, the simple geometry, and learn the principles of all.

At no other period, perhaps, could such inquiries be more deeply and generally interesting, especially in this part of the United Kingdom. The unprecedented growth of epidemic fevers in Ireland from the close of the last century, until they seem to have merged in the awful pestilence which has prevailed everywhere with increasing mortality since 1823 not less than the equally awful threat under the pressure of existing moral and physical causes, not only of its continuance but increase, loudly call for speedy and rigorous investigation with a view to the separation of facts from mere opinions. Measures for relief, long and anxiously expected, moreover, are now said to be contemplated by the government, and poor laws, as well as medical reform, are recommended, doubtfully by some and confidently by others, with that view. In offering to contribute as far as I am able, from my long experience, to promote the efficacy of these measures, and to show why the good intentions of preceding legislators have failed, and how existing institutions may be improved, I propose to refer to what have been the relative effects of concurring causes, and prove that those measures which have been founded wholly on non-contagionism or ultra-contagionism on the one hand, or on exclusive fluidism and exclusive solidism on the other, have alike failed, chiefly because they are exclusive; too much importance having in the one case been attached to some concurrent causes—for example, contagion,—and too little to others, such as famine, general destitution, and malaria. And the treatment of diseases, especially those of a medical nature, will, I think, be found unsuccessful, chiefly because it has been influenced by doctrines based exclusively on *post mortem* appearances detected in the solids, with little regard to the morbid alterations as demonstrable in the animal fluids and living solids in the course of diseases.

By the same process I hope to shew, on the one hand, that neither ultra-contagionism, nor non-contagionism can suffice *per se* for the treatment, either preventive or curative of Epidemics; and on the other, that neither the humoural pathology, nor that founded on post-mortem examination, alone, can suffice for the exigencies of practice; whilst sound systems may be formed from both, if, not aiming like the enthusiastic opponents in either case, at an exclusive principle for a proximate cause: things proved, being made the majority however opposed to opinions, and things not proved, however plausible, the minority in the proposition.

Such are my objects. My motives too, as detailed in my successive publications on the subject, since the close of the last century were always the same. The Etiology however founded on a comparison of concurring causes of Epidemics, and the Pathology I stated in the earliest, as well as the latest of my medical publications, to be demanded by the exigencies of practice, though violently and generally opposed at first, have in each successive year been more generally received: so that the assertions respecting either, which I then made; have been since confirmed by some of my most violent opponents, and what they

once doubted, namely, the occasional absence of contagion in the spread of disease, and the mutual dependance of physiological and pathology in accounting for symptoms, are now denominated truisms, no longer admitting of discussion.

The two departments of inquiry, taken conjointly, relative to my objects and motives, will be treated of separately, in order, first, that the evidence I gave to the Poor-Law Commissioners of inquiry for Ireland, should be further substantiated, with a view to the prevention and remedy of famine and pestilence, as well by referring to the omissions in the printed report of that evidence, as by shewing that the opinions which I advanced on that occasion were adopted by the Medical Commissioners, perhaps unconsciously as their own. Secondly, that the statements contained in a paper which I read the 18th of April, 1836, on the connection of physiology and pathology at an open meeting of the King and Queen's College of Physicians, may be further insisted on and extended, by the aid of more recent information, and which I availed myself of in a paper I had intended for that college.

My leading object on the present occasion is, by my own experience subsequent to my former publications, as well as by the testimony of others, to strengthen the proofs already furnished of the utility of the principles and practice which I have uniformly recommended while tracing to their origin, with a view to check them, the formidable epidemic diseases which, with little or no intermission, have afflicted this country for an interminable period, and are still on the increase. The wretched state of the poor, I have always maintained to be the chief cause of the periodical visitations under which Ireland labours, but I never denied that contagion, lent its aid to the propagation of disease so excited. And I should incur great responsibility were I, at any time, to withhold the information which the professional practice of the greater portion of my life, enables me to afford: more especially, now, when parliamentary inquiry on the subject, in connexion with a system of Poor-laws is still pending.

I have heretofore expressed my opinion that an eleemosynary system would be inadequate to a steady relief of the poor of Ireland, on account of the peculiar circumstances of the country; but doubt will attach to any legislative enactments on the subject. For where are the supplies to come from? Absenteeism withdraws from our country, not only the benefits of the presence and influence of the majority of our nobility, gentry, and great land proprietors, but also the staple capital of Ireland, the rents from her soil. Her foreign commerce is very limited, and her home trade is such that in the very articles of her own consumption she is undersold. The consequence is, that the great mass of the people are starving, and small farmers find it almost impossible to pay their rents. The minor classes of traders find their existence, still more than their profits dependent on a prudence new to their practice; and professional men feel themselves under obligation to those who have made temperance a fashionable virtue.

Ingenuity has been most unworthily exercised, in order to prove that absenteeism is not injurious to a country, but the sophisms of the interested partisan cannot alleviate the wants of the sufferer, nor should they impose on men endued with any portion of common sense.

These remarks on absenteeism will not be found irrelevant when considered in connexion with the causes of epidemic disease. Investigation into these causes have, I am aware, made part of the examinations had before a committee of the house of Commons, but not, I think, so as to exhibit their true magnitude and actual proportions.

In order more fully to shew the relation of absenteeism and other concurring causes, to the poverty and destitution of the labouring poor, and concentration and ratio and increase of disease. I have but to repeat, with little variation, what I have urged on those subjects in my pathological observations, (Part III.) published in 1830, viz.:

In my reports from the Fever Hospital and House of Recovery, especially those in 1820,—21,—22,—23, and 28, I have adverted to this subject when describing the effects which absenteeism has mainly contributed to produce in the Irish metropolis, and which are, I believe, nearly the same as may be observed in the other towns and cities of Ireland.

(To be continued).

MEDICO-CHIRURGICAL FORMULARY, 1837.

(Continued from page 555.)

Electuaria.

Electuarium Anthelminticum. (Vogler.)

℞ Artemisiæ Judiacæ ʒ ij.; Rad. Jalapæ ʒ j.; Aq. Canellæ ʒ ss.; Hydrarg. Subm. gr. vj.—xij.; Syrupi q. s.

A twelfth part of this electuary may be exhibited to infants from two to four years old; and an eighth to those from five to eight years.

Electuarium Carbonatis Sodæ.

℞ Sodæ Carb. ʒ ij.; Cinchonæ ℥ j.; Rhei Pulv. ʒ ss.; Mucilag. Acaciæ q. s. M.

Dose from ʒ ss.—j. daily in jaundice.

Electuarium Anti-Epilepticum. (Mead.)

℞ Cinchon. Pulv. ℥ j.; Stanni Pulv. Valerianæ Pulv. āā ʒ iv.; Syrupi vel Mellis q. s. Dosis ʒ j. m. n.

Electuarium Anti-Gonorrhœale. (H. of Germ.)

℞ Amygd. Dulc. ʒ vj.; Acaciæ. Pulv. ʒ j.; Catechu gr. xxxv.; Copaibæ Bals. ʒ iij. Misce. Dosis ℥ ss. bis vel ter in die.

Electuarium Anti-Hæmorroidale. *(Western Dispensary.)*

℞ Flor. Sulphur. Potassæ Supertart. āā ℥ j.; Potassæ Nitratis ʒ j.; Jalapæ Pulv. ʒ j.; Zingib. Pulv. ϑ j.; Mellis. vel Theriacæ q. s. Coch. med. m. n.

Alterum.

℞ Mannæ ℥ ij.; Potassæ Sulph. Potas. Nitrat. āā ʒ ij.; Sulphuris ℥ j.; Mellis. q. s. Dosis Coch. parv. bis vel ter in die.

Both these electuaries are also used in cases of rheumatism.

Electuarium Balsamicum. (De Barthez.)

℞ Conf. Rosæ ℥ iv.; Syrup Tolu ℥ j; Syrupi. Papaveris ʒ ij.; M. Coch. amp. 3 4 in die.

In catarrh and passive hæmoptysis.

Electuarium Catechu Comp.

℞ Catechu ℥ iv.; Kino ℥ iij.; Canellæ, No. 258. Nucis Moschatæ āā ℥ j.; Syrupi Rosæ ℧ iss. Coque ad consistentiam mellis et adde Opii ℥ iss. Dosis ϑ ij. —ʒ j. m. n.

Employed in chronic diarrhœa and dysentery; and in atony of the digestive organs.

Electuarium Hydragog. (Fouquier)

℞ Scamm. Jalap. Rad. āā ʒ ij.; Squam. Scillæ ʒ iss.; Jalapæ Resin. ʒ ss.; Syrup q. s. M.

Dosis gr. xij—xxiv. in asthenic dropsies.

Alterum. (De Quarin.)

℞ Cinchon. ʒ vj.; Squam. Ferri ʒ ij.; Theriacæ ʒ ij,; Syrupi Canellæ q. s. M.

A scruple of Theriac contains a quarter of a grain of opium. Dose ʒ j. m. n. used in dropsy after paracentesis. Tonic febrifuge and astringent.

Electuarium Magnesiæ. (Ph. Danica)

℞ Mag. Carb. ʒ vj.; Anisi Pulv. ʒ iv,; Croci Pulv. ʒ j.; Syrupi Cichorii q. s. M.

Dose ʒ ss.—ij. according to the age in cardialgia.

Electuarium Pectorale.

℞ Flor. Sulphuris, Croci Orient., Ext. Sambuci, Ext. Glycyrrhizæ āā ʒ ij.; Mellis ʒ ij. Dosis molis nucis ter quaterve in die.

Employed in chronic catarrhs.

Emplastra. (Ph. Brittan.)

Emplastrum Belladonnæ. (Swediaur.)

℞ Suc. recent. Belladon., Olei Lini āā ℥ iv.; Ceræ Flav. ℥ iij.; Terebinth. ʒ iij.; Pulv. Belladonnæ ℥ j. F. S. A. emplastrum.

Sedative emollient and resolvent.

Applied to chronic glanular swellings of children and adults. Plaisters Conium and Hyoscyamus are prepared in the same manner. A drachm of Ioduret of Lead is sometimes added to four drachms of any of the preceding plaisters.

Emplastrum Belladonnæ. (Ph. Lond.)

℞ Emplastri Resinæ ℥ iij.; Ext. Belladonnæ ℥ iss.; Emplastro, calore balnei aquosi, liquefacto Extractum adjice et misce.

Emplastrum Calmans.

℞ Opii Puri, Camphoræ āā ʒ ss.; Empl. Lytharg. ʒ ij.; Misce.

Applied in lumbago and pains in the back from uterine, ovarian or renal disease.

Emplastrum Resolvens. (Hufeland.)

℞ Ung. Althææ ʒ j; Fellis Taurini recentis, saponis Venet. āā ʒ iv.; Olei Petrolii, Camphoræ Pulv. āā ʒ j; Fiat Emplastrum secundum artem.

Applied to white swellings of the knee and other joints.

Emplastrum Antim. Tart.

℞ Picis Burgund. p. iij.; Ceræ Albæ p. j. Fiat emplastrum Antim. Tart. gr. vj. inspergatur.

Emplastrum Roborans. (Swediauer.)

℞ Oxidi Ferri Rub., Picis Burgund. āā ʒ ss.; Olei Oliv. q. s., Opii ℈ ij. M.

Applied in cases of weakness or pain in the back or loins.

Emplastrum Vermifugum.

℞ Aloes Socotrinæ ʒ j.; Olei Anthemidis m. vj.—x.; Terebinth. Venet. q. s. Fiat emplastrum abdomini applicandum.

Alterum. (Ph. Wirtembergens.)

℞ Aloes Hepat. Colocynth., Asarabaccæ Rad., Summit. Tanaceti, Summ. Sabinæ, S. Absinth., Myrrhæ āā ʒiij. Fiat Pulvis cui adde, Fellis bovin. ʒ iij.; et postea misturam sequentem lique-factum Ceræ Flavæ ʒiij.; Terebinth. Venet. Olei Absinthii perdigestionem āā ʒvj.: et dum frigescens, adde Essentiæ Sabinæ Napthæ āā ʒ j.; Extende super luteum et applicetur abdomini.

Emulsiones (Ph. Brittan.)

Emulsio Balsamica. (H. of Germ.)

℞ Bals. Peruv. ʒj.; Olei Amygdal. ʒiss.; Acaciæ Pulv. ʒ ij.; tere simul. et adde Aquæ Rosæ ʒ j.; Fiat haustus bis quotidie sumendus in Blenorrhagia.

Emulsio Bals. Sulphur Anisatum. (H. of Germ.)

℞ Bals. Sulphur. Anisat. ʒ j.; Acaciæ Pulv. ʒ ij. Mellis ʒ j.; Aq. Hysopi. ʒ viij. M. Dosis ʒ ss. secundis horis.

Emulsio Calmans. (De Hean.)

℞ Olei Oliv. ʒ j.; Vitellum ovi unius, Syrupi Diacodii ʒ j.; Aquæ ʒ iv. M. Dosis ʒ ss. tertiis horis.

This was once very much used to tranquillize cough during the night. It is termed Mistura Oleosa in some of our dispensaries.

Emulsio Oleosa.

℞ Aq. Destillatæ Cerasorum Nigri ʒiss.; Olei Amygdal. Syrupi Malvæ āā ʒj.; Pulv. Acaciæ ʒj. M. Dosis ʒ ss. horis.

In catarrh, pneumonia, phthisis. &c.

Emulsio Piperis Cubebæ. (Beral.)

℞ Ext. Cubebæ Alcoholis, Mucilag. Acaciæ āā ʒ iv. M. Dosis ʒ j. in cyatho Aquæ ter quaterve in die.

Emulsio Purgans.

℞ Aq. Menth. Pip. ʒ ij.; Ol. Ricini ʒ j.; Syrupi Cichorii vel Simplicis, Aq. Flor. Aurant. āā ʒ iv.; Vitellum ovi unum. Dosis ʒ j. infantibus secunda vel tertia hora.

Double the quantity of castor oil should be prescribed for adults.

Altera. (Alibert.)

℞ Lactis Amygdal ʒ iv.; Sacch. ʒ iv.; Jalapæ Resinæ gr, viij.; Scammonii gr. vj.; Vitellum ovi, Syrupi limon q. s. M. Sumat dimidium pro dosi.

In chronic cutaneous diseases.

Emulsio Terebinthinata.

℞ Olei Terebinthinæ ʒ j.—viij.; Mucilag. Acaciæ ʒj.; Ovi Vitellum, Syrupi Simplicis ʒ j.; Aquæ Menth. P. ʒ vj. M. Dosis ʒ p.—ʒj.; tertia hora.

Employed in tænia, lumbrici, peritonitis, chronic rheumatism, sciatica, lumbago, chronic catarrh of the bladder. The two preceding emulsions may be administered in appropriate doses to children afflicted with worms.

Enemata (Ph. Lond. 1836.)

Enema Aloes.

℞ Aloes ℈ ij.; Potassæ Carb. gr. xv.; Decocti Hordei Oss. Misce et simul tere.

Enema Colocynthidis.

℞ Ext. Colocynth. c. ℈ ij.; Saponis Mollis ʒ j.; Aquæ Oj. Misce et simul tere.

ENEMA OPII.

℞ Decocti Amyli ʒ iv.; Tinct. Opii ʒ ss. Misce.

ENEMA TABACI.

℞ Tabaci ʒ j. Aq. Ferventis Oj. Macera per horam et cola.

ENEMA TEREBINTHINÆ.

℞ Terebinth. Olei ʒ j.; Vitelli Ovi, quod satis sit; tere simul et adde, Decocti Hordei novendecim. Misce.

EXTRACTA. (PH. BRITTAN.)

EXTRACTUM COLCHICI ACETICUM. (PH. LOND. 1836.)

℞ Colchici Cormi recentis ℔ j.; Acidi Acetici ʒ iiij. Contunde Cormos, insperso gradatim Acido Acetico, dein exprime succum, eumque in vase fictili plumbo non vitrifacto, ad idoneam crassitudinem consume.

EXTRACTAM HÆMATOXYLI, LUPULI, PARIERÆ, SARZÆ.

TARAXACI. UVÆ URSI, eodem modo præparantur quo Ext. Gentianæ.

EXTRACTUM GENTIANÆ.

℞ Gentianæ Concisæ ℔ iiss.; Aquæ Destillatæ ferventis, Congios duos. Macera per horas vigenti quatuor, tum decoque ad Congium, et liquorem adhuc calentem cola; denique ad idoneam crassitudinem consume.

FOMENTATIONES ET LOTIONES.

FOMENTATIO AMMON. CAMPHORATA. (H. OF GERM.)

℞ Ammon. sub. carb. Liq. ʒ iv.; Spt. Camphoræ ʒ iss. Misce.

In Ecchymoses, and as a rubefacient.

FOMENTATIO ANTISEPTICA. (H. of GERM.)

℞ Decoct. Cinchonæ Oij.; Inf. Anthemidis Oj.; Sp. Camph. ʒ iij. Acidi Hydrochlorici ʒ j. Misce.

Employed in sanious ulcers, and in sloughing.

FOMENTATIO AROMATICA. (H. of GERM.)

℞ Caryophil., Macis., āā ʒ i; Vini Rubri Oj. Coque paulisper et cola.

FOMENTATIO ASTRINGENS.

℞ Rad. Bistortæ ʒ ij.; Folior. Ros. Rub. ʒ j.; Vini Rubri Oj.; Ammon: Hydrochlorureti ʒ ij. Misce in usum.

FOMENTATIO CALMANS. (H. of GERM.)

℞ Foliorum Malvæ Manip iv., Fol. Papav., Man. i., Fol. Hyoscyami, Pugil ij.; Aquæ Ferventis Oj. M.

Employed on the Continent of Europe instead of the fomentation of poppy heads and chamomile flowers.

FOMENTATIO DIURETICA. (SCHREGER.)

℞ Sp. Camph., Sp. Juniperi, āā ʒj. Aceti Scillæ ʒ j. Ag. Ferv. Oj. M.

In retentions of urine.

FOMENTATIO VEL LOTIO FRIGIDA.

℞ Liq. Plumbi Acet. ʒ ij.—iij.; Aquæ ʒ viij.; Liq. Opii Sed. ʒj. Misce.

In incipient inflammation, and in chronic irritable ulcers.

ALTERA.

℞ Liq. Plumbi Acet. mxx.; Aquæ Rosæ ʒ viij; Liq. Opii Sed. mxx—xxx. M.

Very much employed in corneitis, tarsitis, nebula and specks on the cornea in strumous children and adults.

2. FOMENTATIO VEL LOTIO ACIDI ACETICI.

℞ Acidi Acetici vel Pyrolig. ʒ j.; Aquæ Fontis ʒ vj. M.

In chronic cutaneous eruptions.

FOMENTATIO ACIDI NITRICI.

℞ Acidi Nitrici ʒ ss.; Aquæ Oj., Fiat lotio in usum.

FOMENTATIO CAMPHORATA.

℞ Camphoræ ʒ iv.; Acid. Acetici ʒ ij.; Aceti Communis ʒ x. Misce.

FOMENTATIO CICUTÆ. (H. of ENGLAND.)

℞ Fol. Conii. ʒ ij.; Anthemid. ʒ ss.; Aq. Oij. Coque et cola.

LOTIO FLAVA.

℞ Hydr. Hydrochlor. gr. xv.; Liquoris Calcis Oj. M.

Employed as the last lotion in chronic diseases of the skin, and in venereal and indolent ulcers.

FOMENTATIO NARCOTICA. (H. DIEU.)

℞ Opii ʒ ij. Aquæ Oj. Misce.

LOTIO NIGRA.

℞ Hydr. Subm. ʒ j. Liq. Calcis ʒ viij. M.

In syphilitic and scrofulous ulcers and excoriations.

FOMENTATIO RESOLVENS. (SWEDIEUR.)

℞ Liq. Ammon. Acet., Alcoholis, Aquæ, āā ʒ iv. Misce.

ALTERA.

℞ Ammon. Hydrochlor. ʒj., Aceti Oj. M.

Used in tumefaction of the mamma, from accumulation of milk. Cloths are wetted with this fomentation and applied to the affected part.

ALTERA. (SCHMUCKER.)

℞ Aquæ ʒ iv.; Aceti. Com. ʒ ss.; Potassæ Nitrat. ʒj. Ammon. Hydrochlor ʒ ss. M.

Employed for contusions, ecchymoses luxations, and fractures.

ALTERA. (WESTERN DISPENSARY.)

℞ Ammon. Hydrochlor. ʒ iij. Aceti. Com. ʒ vj. Aquæ Oj. Fiat lotio.

Used as the last lotion.

ALTERA.

℞ Infusi Sambuci veli Malvæ Oj.; Sp. Camph. ʒ iv. Fiat fotus.

LOTIO SPIRITUOSA.

℞ Sp. Vini, ʒ i.; Aquæ, Oj. M.

In contusions, dislocations, and headaches.

FOMENTATIO SAPONACEA (H. DIEU.)

℞ Saponis Medicinalis, ʒ ss.; Spiritus Vini, Oj. M.

In contusions, dislocations, &c.

FOMENTATIO SINAPIS.

℞ Farinæ Sinapis, ʒ iv.; Aquæ Bullientis Oj. M.

Mustard fomentation is applied to the feet and legs of young children, for three or five minutes, or until it causes irritation, in cases of congestion of the brain, Hydrocephalus, pneumonia, pulmonary engorgement, &c.

LOTIO HYDROSULPHUROSA (H. DIEU.)

℞ Potassæ Sulphatis, ʒ iv.; Aquæ Oj. —ij.; Acid. Sulph. ʒ ss.—j. M.

To be used partially in cases of psora twice a day.

LOTIO TABACI VEL. ANTIPSORICA.

℞ Fol. Tabaci, ʒ ij.; Aquæ Ojj. Misce.

ALTERA.

℞ M. Potassæ Sulphureti, ʒ j. — ij. Aquæ Oj. M.

ALTERA.

℞ Acidi Hydrochlorici ʒ j. — ij. Aquæ Oj. M. Sit. lotio—vide BALNEA.

LOTIO ACIDI HYDROCYANICI. (MAGENDIE.)

℞ Acid. Prussic. Medicinalis, ʒ j.— ij.; Aquæ Lactusæ ʒ vj. M.

Employed in irritable diseases of the skin, ulcerated cancers of the uterus, mammæ and other parts.

LOTIO DISINFECTANS (MAGENDIE.)

℞ Chlor. Calcis ʒ ij.; Aquæ ʒ xij. Misce in usum.

The proportion for disinfecting chambers, prisons, ships, crowded places, &c., is one part of the chloride of lime or soda to sixty of water. If used too strong the vapour causes cough, sense of suffocation, inflammation of the lungs, hæmoptysis, &c.

An ounce of the solution of the chloruret or chloride of lime with twelve ounces of water, may be employed to sponge the body in fevers, blue cholera, or as a rectal or vaginal injection and gargle. It is also applied to spongy gums, and to whiten discoloured teeth. If it causes pain in any of the above cases, it ought to be diluted to a greater extent.

LOTIO ET INJECTIO CALMANS. (ROUX.)

℞ Aquæ Lauro-cerasi, p. i., Aquæ puræ p. iij. Misce.

LOTIO MERCURIALIS—LOTIO RUBRA.

℞ Hydr. Deuto-chlor. ʒ j.; Aquæ Oj. Anchusæ q. s. M.

Employed in simple and venereal herpes.

LOTIO BELLADONNÆ (GRAEFE.)

℞ Ext. Belladonnæ, ʒ j.; Aquæ Goulardi Oj. M.

Applied to tumours and in cases of sloughing. (Repertorum derbesten Heilformeln aus der Praxis, &c. 1829.)

LOTIO CINCHONÆ (H. of INFANTS.)

℞ Cinchonæ, ʒ j.; Aquæ Oj. M.

In some cases Sp. Camph. ʒ viij.

Employed as a fomentation over the surface of the body of delicate infants. It is tonic and stimulant.

LOTIO RUBEFACIENS. (H. of GERM.)

℞ Antim. Tart. ʒ j.; Aquæ Ferv. Oj.; Sp. Camph. ʒ ss. Misce.

ALTERA.

℞ Olei Oliv., ʒ iij.; Ol. Crotonis Tiglii ʒ ss.—j. M.

LOTIO RUBEFACIENS IODINÆ. (LUGOL.)

℞ Iodinæ Pulv. ʒ j.; Potassæ Hydriod., ʒ j.; Aquæ Destillat. ʒ vj. Misce.

LOTIO SAMBUCI.

℞ Infusi Flor. Sambuci, Oj.; Sp.Camph. ʒ viij. Misce.

Employed with advantage in cases of scrofulous infants affected with chronic or indolent glandular enlargements.

LOTIO VINOSA. (H. of INFANTS.)

℞ Vini Rubri, Oj.; Mellis, ʒ ij. Misce.

Employed in ulcers and wounds of an unhealthy aspect.

FUMIGATIO ANTISEPTICA.

℞ Potassæ Nitratis ʒss; Acidi Sulphurici ʒj. M.

This is now replaced by the chlorides of lime and soda.

FUMIGATIO HYDR. SULPH. RUB.

℞ Hydr. Sulph. Rub. ʒ iss.—iij. M. Hauriatur vapor calidus, ope infundibuli omni nocte, in fauces internas.

Employed in obstinate cutaneous and syphilitic complaints. It readily induces salivation.

Dr. Green, of Great Marlborough-street, has invented an inhaler, by means of which salivation will be excited in a few hours.

ALTERA. (H. DES VENER.)

℞ Hydrarg. Sulph. Rub. ʒ iv.; Olibani ʒ ij. Fiat pulvis pro fumigatione, faucibus internis more solito, omni nocte accipiendus.

Employed in syphilitic exostoses, obstinate ulcerations, &c.

GARGARISMATA.

GARGARISMA ACETOSUM. (M. DE SANTE.)

℞ Aceti ʒ ij.; Am. Hydrochlos ʒ j.; Mellis ʒ iss.; Aquæ ʒ xij.; Sit. Gargarisma.

In inflammatory sore throat, or tonsillitis.

GARGARISMA ACIDULATUM. (H. DES VENER.)

℞ Aceti ʒ ii.; Mellis Rosæ ʒ vj.; Decocti Hordei ʒ vj. M.; Gargarizet quantum lubet per diem, pro ut urget morbus.

GARGARISMA ALUMINOSUM.

℞ Aluminis Sulphatis ʒ i.; Decocti Hordei ʒ x.; Syrupi Papaveris ʒ iv. M.

ALTERUM.

℞ Aluminis Sulphatis ʒ j.; Mellis Rosæ ʒ ij.; Decocti Hordei, Infusi Rosæ āā ʒ iv. M. in usum.

Employed in chronic tonsillitis. A gargle of Hydriodate of Potass, or Proto-Ioduret of Mercury is more efficacious.

GARGARISMA ANODYNUM.

℞ Decocti Hordei Oj.; Syrupi Papaveris ʒ j. vel Tinc. Opii. ʒ ij. Misce, fiat Gargarisma.

GARGARISMA ANTISEPTICUM. (H. DIEU.)

℞ Ammon. Hydrochl. gr. x ij.; Camphoræ ϑj.; Decoc. Cinchonæ ʒ vj. M. Hoc liquore fauces assidue humectentur.

In gangrenous cynanche, or sore throat.

GARGARISMA ANTISYPHILITICUM. (H. OF ITALY.)

℞ Hydrag. Hydrochlor gr. j.; Decocti Hordei Oj; Mellis Rosæ ʒ iv. M.

In venereal ulceration of the throat.

GARGARISMA ASTRINGENS.

Vide G. ALUMINOSUM.

ALTERUM. (M. DE SANTE.)

℞ Plumbi Acet. Liq. ʒ ss; Syrupi ʒ j; Decocti Hordei Oj. Misce.

Employed occasionally in Mercurial Salivation, but it has the power of blackening the teeth.

GARGARISMA CALMANS. (H. DES VEN.)

℞ Capit. Papav. no. ij.; Farinæ Lini ʒj.; Aq. Bullientis ʒ vj.; Syrupi Mellis ʒ ij. M.

Used to allay the pain in venereal sore throat; and also in cases of children, when the throat is inflamed, and when spasmodic cough is troublesome.

Gargarisma Chlorinæ. (M. de Sante.)

℞ Chlorinæ Liquidæ, Syrupi āā ʒ ss; Gum. Tragacanth gr. x ij.; Aquæ ʒ iv. M.

In chronic inflammation and ulceration of the throat.

Gargarisma Chlorureti Calcis.

℞ Solutionis Chlor. Calcis ʒ i.—ij.; Mucilag. Acaciæ ʒ j.; Aquæ ʒ v.; T. Opii ʒ j. Misce. Colluantur os, gingivæ et dentes, bis vel ter in die, more solito, hoc gargarismate.

In ulcerations of the gums and throat, and to whiten the teeth.

Gargarisma Cinchonæ.

℞ Cinchonæ Pulv. ʒ ij.; Mellis Rosæ ʒ j.; Acidi Muriatici ʒ j; Aquæ O j. M.

Employed in atonic aphthæ of children; and when ulceration succeeds eschars in gangrene or sloughing of the throat.

Gargarisma Detersivum.

℞ Sodæ Boratis, ʒ ij.; Mucilag. Acaciæ, Syrupi, āā ʒ iv.; Decoct. Hordei, O ij. M. Colluantur fauces hoc gargarismate, bis in die.

Alterum. (H. of Infants.)

℞ Decoct. Hordei, Oj.; Acid. Hydrochlorici, ʒ ij.; Mellis Rosæ ʒ j. M.

Used in ulcerated and sloughing sore throats.

Alterum. (H. Dieu.)

℞ Acidi Sulphurici M xx.; Mellis Rosæ ʒ ij. Decoct. Hordei, ʒ vj. M.

In gangrenous angina or sore throat.

Gargarisma Excitans. (H. of Germ.)

℞ Piperis Indic. ʒ iv.; Magnes. carb. ʒ j.; Aquæ, Aceti āā ʒ iij. M.

In malignant sore throat.

Alterum.

℞ Capsici Pulveris ʒ iv.; Sodæ Hydrochlor. ʒ j.; Aquæ Bullientis, Oss.; Acidi Ferventis, ʒ vi. Misce.

In gangrenous or malignant sore throat, technically termed Angina vel Cynanche Maligna. This is very much used in the West Indies and in most countries at present. (See Putrid Sore Throat, in my edition of Dr. Hooper's Physician's Vademecum 1837.)

Gargarisma Sedativum. (Swediaur.)

℞ Ext. Opii, ʒ j.; Aquæ Bullientis Oj. Alcoholis ʒ j. Misce.

In painful ulcerations of the throat and tongue. I have found the following much more efficacious in ulcerations of the latter, which defied all remedies prescribed by various physicians during twelve and fourteen years.

℞ Plumbi Iodureti, ʒ j.; Mucil. Acaciæ ʒ j.; Aquæ, ʒ vj.; Syrupi, ʒ vji. Tinct. opii. ʒ i. ij. Misce.

Gargarisma Terebinthinatum. (Geddings.)

℞ Mucilag. Acaciæ ʒ vijj.; Olei Terebinthinæ ʒ ij. Misce.

In obstinate mercurial salivation, I have known it to fail in some cases.

Gummi. Resinæ. Ph. Brittan.

Infusa. Ph. Brittanic.

Infusa. Ph. Lond. 1836.

Infusum Diosmæ ʒ j.—Aq. Oj.
„ Lupuli ʒ vj.—Aq. Oj.
„ Krameriæ ʒ j.—Aq. Oj.
„ Parieræ ʒ vj.—Aq. Oj.
„ Rhei ʒ vj.—Aq. Oj.
„ Scoparii ʒ j.—Aq. Oj.
„ Simarubæ ʒ iij.—Aq. Oj.

Infusum Secalis Cornuti vel Ergotæ.

℞ Pulv. Secalis Cornuti ʒ j.—iss.; Aquæ Bullientis ʒ viii. stent per quadrantem horæ cola et adde Sacchari ʒ j. Dosis ʒ p. omni sexta horæ parti ad partum accelerandum.

The decoction or extract is now generally preferred to accelerate parturition. The former may be prepared in the same proportion, strained, sweetened, and mixed with milk.

Injectio Acoustica.

℞ Bals. Peruv. ʒ ij.; Tinc. Moschi ♏ iv.; Ess. Rosæ M. i.; Infusi Sambuci Oj. Misce.

Injiciatur auris bis in die guttis paucis.

Altera.

℞ Fellis Bovis ʒ ij.; Olei Amygdalarum ʒ iss. Misce.

Fiant guttæ acousticæ, harum, bis in die, quantum cavo capi potest injiciatur.

ALTERA.

℞ Camphoræ ʒ j. ; Ol. Amygdal. ʒ j. ; Liq. Opii Sed. ʒ ss.—ʒ j. M.

Instilla guttas quatuor auri, urgenti dolore ; et detineantur gossypio vel linteo immisso.

ALTERA.

℞ Ol. Amygdal. ʒ iv. ; Ol. Terebinth. ʒ ss. ; T. opii. ʒss.

Fiant Guttæ, quarum aliquot in aurem cum gossipio bis quotidie instillentur.

In nervous and paralytic deafness.

ALTERA.

℞ Potassæ Hydriodatis, gr. x — xx ; Aquæ ʒ vj. ; Liq. Opii Sed. ʒ ss. —j. Misce.

Hujus liquoris tepidi, quantum cavo capi potest, bis in die injiciatur, in aurem dolentem supinatam, ac detineatur per aliquot minuta ope lintei vel lanæ, et dein aure prona rursus emittatur.

INJECTIO CHLORURETI SODÆ.

℞ Chlor. Sodæ ʒ ij. Aquæ, ʒ vi. viij. Tinct. opii. ʒ j. Misce.

In leucorrhœa and purulent discharges from the vagina.

ALTERA.

℞ Ol. Amygdal. Dulc. ʒ ij. ; Olei Succini, ♏ xx. ; Sp. Camphor. ʒ ss. ; Tinc. Castorei, ʒ j. Misce.

Employed in nervous deafness ; five or six drops being introduced into the affected ear, morning and evening, and retained with wool, cotton, or lint.

The ear should be carefully syringed once or twice a week when affected with discharge, or too much dryness.

INJECTIO DETERSIVA. (H. of Italy.)

℞ Hydr. Hydrochlor. gr. ij. ; Decoct. Hordei Oj. ; Tinct. Myrrhæ ʒ j. Misce.

In cases of caries and necrosis caused by constitutional syphilis.

INJECTIO EMMENAGOGA. (H. of Italy.)

℞ Liq. Amm. Puræ m. x. ; Lactis Vaccæ ʒ j. ; Fiat injectio ter in die usurpanda.

In amenorrhæa in plethoric habits.

INJECTIO EXCITANS. (Lugol.)

℞ Iodinii gr. ij.—iv. ; Potassæ Hydriod. gr. iv.—vj.—viij. ; Aquæ Oj. M.

Employed as injections in fistulous passages, in lotions, collyria and fomentations.

INJECTIO MERCURIALIS. (H. of Italy.)

℞ Deuto chlor. Hydr. gr. vj. ; Aquæ Destillat. Oj. ; Tinct. Opii ʒ ss. Misce.

Applied to syphilitic ulcerations of the genital parts of women.

INJECTIO NARCOTICA.

℞ Liq. Opii Sed. vel Vini Opii ʒ j.—iss. ; Inf. Lini. vel. Amyli Oj. M.

Employed in urethral blenorrhagia in both sexes.

INJECTIO TONICA. (H. DIEU.)

℞ Cinchonæ ʒ j. ; Aquæ Oj. ; T. Opii ʒ j. M.

Applied to fistulous passages and chronic indolent ulcers.

JULEPA.

JULEPUM ACIDULATUM. (H. of Italy.)

℞ Acid. Hydrochlor. ʒ j. ; Aquæ ʒ iv. ; Syrupi ʒ j. M.

Dosis coch. med. 2 horis. In colliquatine sweats and hæmoptysis.

ALTERUM. (H. of Germany.)

℞ Sp. Æther Nitros. m. xx. ; Decoct. Hordei Oiss. ; Syrupi Limon. ʒ ij. Misce.

JULEPUM ANODYNUM.

℞ Syrupi Simplicis ʒ ij. ; Aquæ ʒ iss. ; Mucilag. Acaciæ ʒ iij. ; Tinct. Opii m. x —xx. ; Acidi Hydrocyanici m. j. M. Dosis ʒ j. 3. 4 in die.

In catarrhal, croupal and spasmodic cough in children ; and also in hooping cough. Camphorated Liniment with Opium (See Formulary) ought to be rubbed on the face and spine at the same time.

ALTERUM.

℞ Aq. Destillat. Lactucæ ʒ iv. ; Syrupi Diacod ʒ j. ; Aq. Flor. Aurant ʒ iv. M. Dosis ʒ ss. 3 in die.

JULEPUM BECHICICUM VEL TUSSICUM.

℞ Mucilag. Acaciæ ʒ j. ; Syrupi Tolut. ʒ ij. ; Aquæ Menthæ Pip. ʒ v. ; Tinc. Camph. C. ʒ j. Misce in usum. pulv. āā ℈ j. ; Syrupi ʒ j. ; Aquæ ʒ iv.—ʒss. 3 4. in die.

In recent catarrh accompanied by periodical spasmodic cough, which conti-

nues incessant for some minutes, and returns periodically, twice or oftener daily.

Julepum Nitratis Potassæ.

℞ Potassæ Nitr., Spt. Æther Nitros. āā ʒ iij. Syrupi Limonum ʒ iv.; Aquæ Menthæ Pip. ʒ x. M. Dosis ʒ j. 3 in die.

In some cases a grain of Tartarized Antimony is added. In chronic bronchitis and incipient phthisis.

Julepum Pectorale (H. of England.)

℞ Mucilag. Acaciæ ʒ viij.; Mist. Acaciæ ʒ ij.; Aquæ Menthæ Pip. ʒ v.; Syrupi Simplicis ʒ j. Misce. Dosis ʒij.; 3. 4 in die.

This is also called Mistura Mucilaginosa in some British hospitals and dispensaries. It is much used in recent catarrhs with great advantage.

Alterum.

℞ Mist. Pectoralis ʒ iij.; Mist. Ammoniaci ʒ iv.; Tinc. Camph. C. ʒ ij.—iij.; Acidi Hydrocyanici m. vj. M.

Julepum Mucilaginosum. *(Western Dispensary.)*

℞ Mucilag. Acaciæ ʒ ij.; Aquæ Fontis ʒ iv.; Theriacæ ʒ ij. Misce. Dosis ʒ ss. urgente tussi.

In recent catarrhs unaccompanied by bronchitis, pneumonia or pleuritis. This is the common cough mixture of many dispensaries.

Julepum Mucilag. Anodynum.

℞ Mist. Mucilaginosæ ʒ vj.; Tinc. Camph. C. ʒ ij.—iij. M.

Employed as the preceding.

Julepum Scilliticum.

℞ Oxymellis Scillæ ʒ j; Spec. Bechic,* Acaciæ ʒ iv. M. Dosis ʒ ss. 3 in die.

In cough accompanied by dropsy, and sparing expectoration, in chronic bronchitis.

Julepum Sudorificum. (H. of Italy.)

℞ Liq. Am. Acet. ʒ iij.; Camphoræ in Alcoholis Solutæ q. s. ʒ ss.; Oxymellis Simplicis ʒ j.; Infusi Sambuci vel Aq. Menth. Pip. ʒ iv. M. Dosis ʒ ss.; secunda vel tertia hora.

* Dates, Jujubes, Figs and Raisins.

Linctus Albus.* (Codex Paris.)

℞ Aquæ ʒ iv.; Ol. Amygdal. Sacch. āā ʒ iv.; Aq. Flor. Aurant. ʒ iij.; Pulv. Tragacanth. gr. xvj.; Amygdal. Dulc. No. xvi.; Amygdal. Amar. No. ij. Fiat linctus. Dosis Coch. Med. singulis semihoris vel horis.

In troublesome cough.

Linctus Anisatus.

℞ Sacchari ʒ ij.; Olei Anisi ♏ iv.—vj.; Aquæ ʒ iv.; Syrupi Papaveris ʒ j.; vel Liq. Opii ♏ ij.—vj. Misce.

Employed in flatulent gripings of young infants; ʒ j. occasionally.

Linctus Anisatum cum Ipecacuanha.

℞ Linctus Anisati ʒ iv..; Syrupi ʒ j.; Vini. Ipecac. ʒ ss.—j.; vel Pulv. Ipecac. gr. j. Misce.

Used to remove mucosities, or phlegm, in the respiratory and digestive passages of children.

Linctus Anodynus.

℞ Linctus Simplicis ʒ iv.; Aquæ Flor. Aurant. ʒ ij.; Vini Opii ♏ xx—ʒ ss; Dosis ʒ i.; singulis vel secundis horis donec supervenerit somnolentia.

When infants are deprived of sleep by any kind of irritation.

Alter.

℞ Mucilag. Acaciæ ʒ iv.; Syrupi Simplicis ʒ j.; Liq. Opii. ♏ iv.—xv.; Vini Ipecac. ♏ x.—xxx.; Acidi Hydrocyanici ♏ j. Misce.

When infants are deprived of sleep by catarrhal cough.

Linctus Astringens.

℞ Catechu ʒ ij.; Aq. Cinnam. ʒ iv. tere simul, et adde Orchidis Pulv. ʒ iss; Syrupi Papaveris ʒ i.—ij. M. Dosis ʒ ss. 3 in die.

In dysentery, diarrhœa, and hœmoptysis.

When the above fails, add, T. Kino ʒ iv.—vj.; Ext. Hæmatoxyli ʒi.—ij.

Linctus Anthelminticus.

℞ Linctûs Simplicis ʒ iv.; Corallina Officinalis ʒ ss; Ol. Amygdal. ʒ j. Syrupi Limonum ʒ j. Misce.

* Linctus, Looch or Lohoch differs from an emulsion only in being of greater consistence.

This looch acts as an aperient and often expels lumbrici.

LINCTUS BALSAMICUS. (H. OF GERM.)

℞ Bals. Peruv. ʒ i.; Sperm. Ceti ʒ ij.; Vitellum Ovi, q. s. tere et adde, Mucilag. Acaciæ, Syrupi āā ʒ j.

In chronic bronchitis.

LINCTUS EXPECTORANS.

℞ Linctûs Simplicis ʒ iv.; Syrupi Papaveris ʒ iv.—vj.; Antim. Subhydrosulph. gr. ij.; Aquæ Flor. Aurant. ʒ ij. Misce.

When the cough is dry and tormenting in cases of infants and children.

ALTER.

℞ Emulsionis Amygdal. ʒ iv.; Syrupi Simpl. ʒj.; Pulv. Tragacanth gr. vj.; Syrupi Papav. ʒ i.—vj.; Antim. Vini ♏ xx.—xxx. Misce. Dosis cochleare med. vel amplum, urgente tussi.

LINCTUS LAXATIVUS.

℞ Linctûs Simplicis ʒ iv.; Inf. Rhei ʒ iss.; Tinc. ejusdem c. ʒ i.—ij.; Aq. Cinnam. ʒ j.—ij. M. Dosis ʒ ij.—iv. pro re nata.

LINCTUS PECTORALIS.

℞ Oxymellis Scillæ, Mucilag. Acaciæ, Syrupi Simplicis āā p. e. Dosis ʒ ss. secunda hora.

In chronic pulmonary catarrh.

ALTER.

℞ Flor. Sulph. ʒ j.; Mucilag. Acaciæ Mellis āā ʒ iss.

Used as the last preparation.

LINCTUS SCILLITICUS.

℞ Syrupi Simplicis ʒ iv.; Oxymellis Scillæ ʒ i—iv. Misce.

Expectorant. In catarrh.

LINCTUS SIMPLEX.

℞ Syrupi Simplicis, Olei Amygdal. āā ʒ ij.; Aq. Destillat. ʒ ij. M.

In coughs of children.

LINCTUS TEREBINTHINATUS.

℞ Ol. Terebinth. ʒ iij.; Vitellum Ovi; Aquæ Menthæ Pip. ʒ vj..; T. Opii ʒ j. M. Dosis ʒ ss. tertiis horis.

A stimulant, cathartic, diuretic, anthelmintic, and astringent.

The reader will find a full account of this and of all efficient medicines iu the large edition of a *New Practical Formulary of Hospitals*, translated by me from the French of MM. Edwards and Vavasseur, 1836.

LINIMENTA PH: BRITTANIC.

LINIMENTUM AMONIACALE.

℞ Liq. Ammoni ʒ x.; Olei Olivarum ʒ v. Misce.

This differs but little from the *Linimentum Ammon:* Ph. Lond., and is applied on flannel round the throat in swelling of the glands in children, and in cynanche tonsillaris vel tonsillitis.

LINIMENTUM AMMON. CAMPHOR.

℞ Ammon. Subcarb. Liq. ʒ ij; Ol. Oliv. ʒ vj.; Camphor ʒ j. Misce.

In indolent swellings of glands.

LINIMENTUM AMMON. C. LYTTA.

℞ Liniment. Amm. ʒ iss. Tinc. Lyttæ mxv.; Camphor ʒ iss. M.

Employed in cases of paralysis.

LINIMENTUM ANODYNUM. (PH. EBLAN.)

℞ Saponis Duri ʒ iv.; Opii ʒ j.; Camphor ʒ ij. Olei Rosmarini ʒ ss.; Alcoholis Oij. Misce.

In chronic rheumatism, local pains, and rubbed over the cheeks, back and sides of the neck, spine and chest, in hooping cough, with great advantage. It is designated *Lin. Saponis et Opii*, in the Dublin Pharmacopœia.

ALTERUM. (MILITARY HOSPITALS.)

℞ Olei Oliv. ʒ iv.; Liq. Ammon. ʒ v.; Tinc. Opii ʒ iv. M.

ALTERUM. (H. of INFANTS.)

℞ T. Opii ʒ i.—ij.; Ol. Oliv. ʒ iv.; Camphor ʒ j.—ʒ iss. M.

Employed as the anodyne liniment first described.

LINIMENT. ANOD. ET RESOLVENS. (H. DIUE.)

℞ Olei Lilii Candidi ʒ vj.; Extracti Hyoscyami ʒss.; Saponis Albi ʒij. Misce.

Used in glandular enlargements. The extracts of Conium and Belladonna may be employed in the same proportion as the Hyoscyamus.

LINIMENTUM ANTISPORICUM.
(H. of ITALY.)

℞ Calcis Recentis, Flor. Sulphuris, āā ʒ ij.; Olei Olivæ q. s. Misce.

LINIMENTUM ANTI-ARTHRITICUM.
(RYAN.)

℞ Potassæ Hydriod. vel Plumbi Ioduret. ʒ ij.—iij.; Olei Oliv. ʒ iv. Liq. Opii Sed. ʒ iss. vel. Morphiæ, gr. ij. Fiat linimentum, quo leniter fricetur partes affectæ, bis vel ter in die, ac dein tegantur fascia lanea.

This is an effcient application in swelling of the joints after gout or rheumatism.

LINIMENTUM ARSENICALE.
(SWEDIAUR.)

℞ Arsenici Oxidi Albi gr. ij.; tere intime cum Ol. Oliv. ʒ j.

In obstinate cutaneous and paralytic diseases. It should be used very cautiously, and double the quantity of oil added in most cases at first.

LINIMENT. CALCIS OPIATUM.
(H. of GERM.)

℞ Liq. Calcis, Olei Amygdal. āā ʒ iii.: Ext. Opii Aquos. gr. j. Misce.

Applied to chaps and excoriations of the nipple, and it is placed under artificial nipples.

(To be continued.)

CASES OCCURRING IN THE CLINICAL WARDS OF GUY'S HOSPITAL.

(Continued from page 550.)

CASE OF DELIRIUM TREMENS.

Reported by MR. C. CHAPMAN.

JAMES MELLER, aged 37, admitted into Job's Ward, Nov. 28, 1836, under the care of Dr. Cholmeley; is a tall muscular man, by occupation a carrier. His wife states, that for the last seven years he has been much addicted to the use of spirits, seldom passing a week without becoming intoxicated once or twice. Last Saturday he was very much so (not having been sober for a single night the previous week); and while in this state, he got wet through, from exposure to the weather. On waking the following morning, he complained of pain in the head and back, which was succeeded by a rigor of several hour's duration. At the expiration of the rigor, the pain in the head became much increased, and he noticed that his face was much swollen and very red. These symptoms compelled him to keep his bed, and to abstain entirely from the use of his accustomed stimulus.

On the 4th day from the commencement of the erysipelas, he became delirious, getting out of bed, and threatening to strike his wife.

Symptoms on admission.—Aspect wild and staring. On approaching him, he shrinks, and appears much frightened. His limbs, particularly hands, tremble violently. Pulse 104, small, and easily compressed. Tongue moist, and covered with a thick white fur. The face is covered with erysipelaous vesicles; and is so much swollen, that he can scarcely see out of the right, and not at all out of the left eye. He is quite delirious.

Fiant puncturæ faciei.

Ext. Hyos ℈i. Hyd. Sub. gr. x. st.

Ext. Hyos. gr. x. Cal. gr. iij. sextis horis.

Vespere. The delirium became much aggravated: he threatened violence to those about him, getting out of bed, and swearing loudly. Pulse more feeble: muscular contractions very powerful. He was confined, in his bed, by straps.

Liq. Ammon. Subcarb. ex. Inf. Serpentar. sextis horis.

29. He was very quiet from 10 last night till 3 this morning, sleeping a little occasionally. Soon after 3, he became violent; but is now (1 P.M.) very quiet. A pint and a half of urine was drawn off by the catheter. Bowels not open.

Ol. Croton. m. i. statim, et rep. quartis horis ad sedes.

Vespere. He is furiously delirious, trembling violently, and endeavouring to extricate himself from the straps.

Ext. Hyos. ʒss. Cal. gr. v. statim.
Brandy and Soda-water.

30. Pulse 80, more distinct and stronger. Tongue cleaner. Slept well in the night. Bowels freely open; evacuations green, and very offensive. He became perfectly quiet between 5 and 7 A.M., and answered questions distinctly; but in a short time he again became violent, and has remained so till the present time.

Ext. Hyosc. c Cal. statim, t sextis horis.

Dec. 1. Passed the night without sleep, singing, swearing, and talking to

himself. Bowels opened. Pulse 96, soft. Tongue covered with a dark-brown incrustation. Sordes on the inner surface of the lips.

Pulv. Dov. ʒss. Cal. gr. v. statim.

Radatur caput, et app. Lot. frigid. —Stout.

Vespere. The first dose was rejected: another was administered shortly afterwards, which produced several hours sleep.

2. Another dose of Dover's powder and calomel was given him in the middle of the night, which caused him to sleep, with slight intermissions, till this morning. Bowels slightly opened. Has passed a small quantity of dark-coloured urine. Is perfectly rational. Trembling very much diminished. Tongue less furred. Is now capable of feeding himself. Pulse 104. Swelling of the face much diminished.

Cal. c Col. ℈i. statim.—Pulv. Doveri ℈i. vesp.—Stout.

6. Has continued quite sensible. Pulse 72, and soft. Bowels freely opened. A free incision was made into the left upper eyelid, and a quantity of pus evacuated.

Ammon. Subcarb. gr. iv. Sodæ Carb. gr. x.

Tinct. Cinch. ʒi. ex. Dec. Cinch. ter die.

10. Complains only of a sore mouth. Pergat.

12. Complains of a sensation of cold. Tongue clean and moist.

Pulv. Emet gr. xv. statim.

16. Quite convalescent. Bowels not open. Appetite good.

Ol. Ricini ʒss. statim.—Mutton-chop.

He continued to improve from this time till the 26th; when he was presented, perfectly cured.

CASES OF HERNIA, POPLITEAL ANEURISM, WOUNDED ULNAR ARTERY, AND MALIGNANT TUMOR; WITH REMARKS, BY MR. BRANSBY COOPER.

CASE 1.—*Strangulated Scrotal Hernia.*

JOHN ROBINS, of middle age, employed in the wine-trade, and of an irritable constitution, was admitted into Luke Ward, on the 15th of July, 1836; being the subject of a strangulated scrotal hernia on the right side.

On being questioned as to the history of his complaint, he described, that, for the last ten years, he had been liable to enlargement on that side; and that, although at times he suffered but little inconvenience from the swelling, he believed that he had never been able entirely to reduce it; and that on the day of his admission, as he was walking in the street, he suddenly became affected with severe pain in the tumor, which pain extended across the lower part of the abdomen. He had been in the habit of wearing a truss; but this had been in so bad a state, as frequently to permit a further descent of intestine. Upon the present occasion, as usual, he attempted to return the contents of the tumor into the abdomen; but not being able to do so, he became alarmed, and applied to Guy's Hospital for relief.

Mr. Birkett, the dresser for the week, immediately employed the taxis; which proving ineffectual, he ordered that the patient should be put into a warm bath; and directed that ice should afterwards be applied to the tumor. The symptoms not being very urgent, aperient medicine was prescribed, and a colocynth enema administered: and Mr. Birkett, considering that there were no signs indicating the necessity of immediate operation, determined to await the result of the remedies employed.

On Saturday morning, none of the patient's symptoms being relieved, Mr. Cooper was sent for; when he found the patient labouring under the following symptoms:—

He complained of constant nausea, accompanied with pain and swelling of the abdomen, and considerable tenderness of the hernial tumour. He has passed no motion since Thursday: there was, however, but little acceleration in his pulse, and he was free from any anxiety of countenance. Mr. Cooper now attempted to reduce the hernia; and, after having continued the taxis for some time, diminished the tumour to the size of which the patient described it had been for several years: and as the fore-finger could be readily passed through the external ring into the inguinal canal, Mr. Cooper believed he had succeeded in the reduction; and ordered fomentations to be constantly applied to the abdomen, sixteen leeches to the scrotum, and a castor-oil enema directly to be administered.

The patient, however, seemed in no de-

gree relieved by the means which had been employed: his constipation remained insuperable; his nausea increased; and he passed a restless night: and the case becoming more urgent, Mr. Cooper was again sent for on Sunday morning, and, upon his arrival, immediately recommended the patient to submit to an operation, to which he readily consented.

The operation was commenced with the intention of not opening the hernial sac, unless circumstances should render it necessary to do so. The peritoneal covering being exposed, a director was passed between the fascia spermatica interna and the peritoneum, and the stricture divided: every attempt was then made to empty the sac; but, after continued though gentle manipulation, it was found impossible to succeed; and therefore the sac was laid open, when a large knuckle of intestine presented itself to view. It was of a very dark colour; and adherent, in many points, to the sac, by recent depositions of adhesive matter; which were torn through, and then the intestine was pushed back into the abdomen.

Mr. Cooper then passed his fore-finger through the internal ring; when he found that, although the contents of the hernial sac were within the cavity of the abdomen, they were yet confined in a limited space, by some adhesions immediately above the internal ring; and until these were torn through, that portion of intestine could not be said to be perfectly free. The wound was then dressed as usual, and the patient placed in bed; but he seemed to be but little relieved by the operation. The abdomen still remained tender to the touch, and somewhat tympanetic; his nausea and vomiting continued; his pulse became more rapid; and, for the first time, his countenance expressed considerable anxiety. Mr. Cooper, therefore, immediately ordered sixteen ounces of blood to be taken from the arm; five grains of calomel to be administered, and three more to be given after two hours; and fomentations to be constantly applied to the abdomen. The bleeding almost immediately relieved the aggravation of his symptoms: in about two hours he had a free evacuation from his bowels, and he passed a comfortable night.

On the 18th, he expressed himself as being free from pain: the swelling of the abdomen was much diminished; the pulse but little quicker than natural; and he seemed altogether much relieved.

Hydr. Subm. gr. iij. statim sumenda.
Magn. Sulph. ʒ iss. Liq. Ammon. Acet. ʒ iss. Aq. Menthœ viridis ʒ vss. m. Cap. cochl. magn. ij. secundâ quâque horâ, donec alvus benè responderit.

18. The swelling and tenderness of the abdomen were infinitely diminished, the bowels having been freely opened: he complained, however, that he had not slept so well as on the previous night. On examination of the wound, a blush of inflammation was found extending from it to the scrotum, which probably had been the cause of his sleepless night and present irritability. Evaporating lotion was ordered to be applied to the scrotum; and two grains of calomel and one grain of opium to be taken at bed-time. Lemonade was also ordered for his usual beverage.

20. He now complained of but little uneasiness in the abdomen: the pulse was natural, the bowels freely open: he had, however, some slight heat of skin. and his tongue was a little white.

Cal. gr. iss. Op. gr. ss. h. s. s.
Ammon. Carb. gr. x. Sodæ Subcarb. gr. viij. Tinct. Hyosc. ♏. x. Mist. Camph. ʒ iss. m. ft. haustus: adde succi Limonis rec. ʒ iij. et dum efferv. quartâ quâque horâ sumat.

Under this treatment, and from this period, he continued to improve, without experiencing a single untoward symptom. That portion of the wound which had not united by the adhesive inflammation, rapidly filled up by granulation; and on the 10th of August he was able to wear a new truss, with which he had been furnished by the Hospital; and was discharged, cured.

REMARKS.

There are many circumstances connected with this case which render it one of considerable importance; and from which, valuable deductions, applicable to the treatment of hernia in general, may be drawn. First, in reference to the length of time during which the patient had been the subject of an irreducible rupture,—a circumstance which renders it extremely difficult for a surgeon to judge, whether or not, upon the application of the taxis, he has reduced the protruding portion of the viscera; for although he may, by the force employed, have greatly reduced the size of the tumor, no tact which he

may possess, will afford the means of judging of the comparative importance of the part still left protruding. Such was my difficulty in the case now submitted to perusal; for although I thought, from the patient's declaration, that the tumor, by my efforts, had been reduced to the same condition, as to size, that it had been in, immediately prior to the last descent, on Friday, the 15th, still it proved that such changes had taken place, as to render the position of intestine left within the sac, incapable of performing its natural function, thus leading to the necessity of a further operation for its relief.

Whether the intestine thus left was a portion originally irreducible, or whether it was a knuckle recently made so by the repeated attempts to reduce it, it is difficult to judge: but I should be disposed to believe the latter to be the case; as, during the operation, I found the adhesions to be formed of easily-separable lymph; and as there was nothing but intestine in the sac, it is difficult to comprehend what could have formed the permanent tumor, of which the patient speaks. So much, then, for the reliance which can be placed upon a patient's account of his own condition; and the necessity of the surgeon's scrupulous attention to investigate closely every circumstance connected with the deviation from natural form; for here there could have been no other permanent enlargement, than that which would have resulted from thickening, from the constant pressure of a truss.

A second peculiarity in this case was the urgency of the local symptoms produced by the insuperable constipation, and the mildness of its effect upon the constitution; for although, as it is described, he had no alvine excretion for three days, and suffered from tenderness and swelling of the abdomen, hiccup, and nausea, still the pulse remained but very little quicker than natural; the expression of the countenance was calm, and the functions generally duly performed. Such symptoms, therefore, should not lead us to procrastinate an operation which may be safely performed before the vital energies are affected, and which must become proportionally dangerous as they sympathize with the local derangement. Who ever has had reason to regret having performed the operation for hernia too early? while, on the contrary, how many have had to regret a delay, to which almost invariably may be attributed its want of success. I should therefore lay it down as a rule, that wherever there is a tumor, in the usual situations of rupture, concomitant with insuperable constipation, and where that tumor cannot be removed by the application of the taxis, the operation should be immediately performed.

In the performance of the operation, as I have already described, it had been my intention not to open the hernial sac; and I proceeded, therefore, to divide the structure externally to the neck of the sac. In this part of the dissection there is some difficulty; for the fascia spermatica interna is so attenuated and diaphonous, as to render it scarcely distinguishable from the peritoneum itself; but the surgeon may ascertain whether he has completed this step or not, by passing his finger towards the internal ring; into which the finger will readily enter, if the fascia be divided; but, on the contrary, can only be insinuated under the abdominal muscles, if it be not yet cut through. Having relieved the neck of the sac from stricture, I attempted to empty the sac of its contents; but was unable to do so, from reasons already described. But this circumstance, as the case proves, does not at all militate against that mode of operation, as proposed by Mr. Key, being adopted; for I was capable immediately to proceed in the plan of operation usually employed, without adding one iota either to difficulty or danger.

There are many, I am sure, who, had they seen the state of the intestine which was exposed to view upon opening the sac, would have doubted the propriety of its being returned into the cavity of the abdomen; and, indeed, its colour would have warranted such a doubt. But, as I found it retained its natural elasticity, and felt assured that, if there was any chance of its restoration, that chance would be much greater if it were returned into the cavity of the abdomen than if it were left in the hernial sac exposed to the influence of the atmosphere, I did not hesitate to adopt the former plan. To the after-treatment, as much as to the operation itself, I attribute the recovery of this patient; for, from the aggravation of symptoms which so rapidly followed the operation, I believe, that but for the bleeding, and repeated doses of calomel, peritonitis would have supervened; when, as experience to often teaches us, death generally closes the scene.

REMARKS ON POPLITEAL ANEURISM.

It may possibly be considered, that a case of popliteal aneurism is scarcely worthy of recital, at the present advanced state of surgical knowledge; and that there are now but few surgeons who are not perfectly competent to treat such cases, or who require to have their minds refreshed on a subject which has ceased to bear with it any novelty. In answer, however, to this imputation, I should say, that even the most experienced practitioner will perhaps admit, in the various cases which he has witnessed of this disease, that he generally found some peculiarity in each, which rendered them different, and led to the necessity of a treatment particularly applicable to the case under consideration, and precluding the possibility of any general rule being laid down and constantly observed.

I have been more especially induced to recite this case, from the impressions left on my mind after reading the published experience of other surgeons concerning the fatality which has followed the operation for aneurism; and which I believe is often attributable to the neglect of sufficient preparatory treatment, before the patient is exposed to the application of a ligature upon the vessel. Every circumstance connected with the first deviation of a patient from health should be attended to; so that a just estimation may be formed, whether the disease was the result of idiopathic tendency, or of accidental injury: and if of the former, appropriate remedies may often tend, not only to prepare the patient for operation, but also to lead to an ultimate happy termination of the disease, as well as to diminish the liability to its recurrence.

Before, therefore, a surgeon determines to submit a patient, the subject of an aneurism, to an operation, he should not merely consider the circumstances connected with the affected artery, but should at the same time, bear in mind the different processes by which nature herself will sometimes effect a spontaneous cure; and closely investigate the constitutional powers of his patient, so as to adapt his treatment to assist these efforts, as indicated by the symptoms which present themselves.

It is quite true, that there is scarcely any artery in the body, not excepting the aorta, around which a ligature may not be placed in some part of its course, so as to prevent the flow of blood through its diseased portion; but I wish to impress upon my readers, that preliminary means are generally required, before such an operation is had recourse to: as, for instance, if the patient be of a sanguineous temperament, small quantities of blood should be drawn from the arm; great attention should be paid to the state of the bowels; and the patient should be kept free from any mental excitement for some days, not only for the purpose of preparing him for the operation, but also to allow the collateral branches of the limb more time to accommodate themselves to the new direction which the blood must inevitably take, from the changed condition of the principle trunk. Sometimes it may occur, that such delay would be improper, and that the operation must immediately be performed; as where the artery has suddenly given way, from any accidental cause, &c., then, of course of the two evils, the less must be adopted.

After having performed the operation, the treatment must be regulated equally by a knowledge of the habits as of the constitution of the patient; for we may, on the one hand, do as much harm by entirely removing stimulants from those who are frequently subject to its influence, as we may, on the other, err from the neglect of depletion in plethoric habits.

If, in a pathological point of view, such a state can be admitted, I should say that the subject of the following case exhibited an aneurismal diathesis: for perhaps we may consider that a highly irritable person with lax fibre and feeble powers is, of all individuals, the most liable to a diseased state of artery. Indeed, the manner in which he believes he induced the disease points out the diseased condition of the arterial coats; for he considers the aneurismal tumor was produced by the muscular efforts employed to save himself from falling forwards; although, as far as I can discover, he does not appear to have dilatation of any other artery in his body.

Case 2.—*Popliteal Aneurism.*

Thomas Forster, aged 28, a bricklayer, of a leucophlegmatic temperament, of common stature, and apparently of a delicate constitution, his chest and limbs being covered with a great quantity of fine hair, was admitted into Guy's Hospital on the 19th of July 1836, in consequence of a tumour situated in the popliteal space of the right leg, which was immediately discovered to be aneurismal.

He describes, that he first noticed the swelling about a fortnight before his admission; and was led to do so from pain in the ham, extending along the inner side of the leg and foot, towards the great toe. It then pulsated strongly; and was about the size of a large walnut, and gradually increased to that of a small orange: the pain became very much aggravated, was constant and heavy, and increased by a thrilling sensation during the pulsations of the artery: there was also great heat in the situation of the tumour. Cold lotion was applied, and the lint kept on by a bandage, which induced swelling about the ankle: this was treated as rheumatism. The tumor was quite circumscribed.

The operation of tying the femoral artery was performed on the day following his admission; as there was sufficient exigence, from the natural temperature of the limb, that a free circulation of blood was maintained below the aneurismal tumour; and also, from the irritable state of the patient, Mr. Cooper thought it would be wrong to keep him in longer suspense.

The steps of the operation were performed in the usual manner; and on passing a ligature around the femoral artery, it appeared upon examination, as if the vessel were divided into two distinct branches, both communicating to the touch a pulsatory motion. It was found, however, upon stricter examination, that the upper and external branch derived its apparent pulsation from the motion of the other vessel, which proved to be the femoral artery; as by tightening the ligature, the pulsation of the tumour immediately ceased and never recurred. The wound was then dressed in the usual manner, and the patient laid in bed.

July 21. Had passed a restless night; but seemingly from constitutional irritability, he was perfectly free from pain. The limb which had been enveloped in flannel, was of its natural temperature.

Calomel. gr. iss. Opii gr. ss. hac nocte.
Mistura salina ter quotidie.

22. Had still passed a restless night, notwithstanding the opium; but described himself perfectly free from pain, although he felt inconvenience from the influence of the opium, which was therefore omitted.—The wound appeared going on well.

Extracti Hyoscyami gr. viij. omn. noct.—Pergat.

23. Had passed a much better night; but yet pourtrayed some anxiety of countenance, and the symptoms usually concomitant with irritative fever.—Pergat.

He continued in this state, the wound making but very slight progress towards reparation (suppuration having commenced), until the 31st; on which day the ligature came away, being short of eleven days since the period of the operation.

August 1. He had passed a very restless night, and complained of considerable pain in the limb; his pulse quick and feeble. Mr. Cooper, who was present at the dressing of the wound, pressed out a large quantity of pus, which had burrowed beneath the integument, and which had caused the whole wound to gape open. The wound was ordered to be dressed every day; and a pint of porter and mutton chop were given daily.

Quininæ Sulphatis gr. ij. Acidi Sulph. dil. m. iv. Tinct. Hyoscyami m. vi. Inf. Gentianæ comp. ℥i. ft. haustus, ter quotidie sumend.

From this period he gradually improved, both as to his general powers of constitution and the healing of the wound.

His countenance is quite free from anxiety: he is perfectly free from pain: passes good nights: his appetite is restored: the wound nearly healed: and in fact, he may be considered in a state of perfect convalescence.

Case 3.—*Wound of the Ulnar Artery.*

Reported by Mr. William Gale.

George Paris, aged 10, was admitted into Cornelius Ward, on the 4th of June 1836. He described, that about five weeks since he fell down: and putting his arms out to save himself, a severe wound was inflicted with a flint just above and to the inner side of the left wrist-joint. The accident was immediately followed by a considerable arterial bleeding, which was restrained by pressure on the wound. The hæmorrhage, however, occurred upon various occasions, apparently whenever the bandages became loosened; so that the boy's health began to be affected by the repeated bleedings: and he was therefore brought to Guy's

Hospital on the 4th of June, five weeks after the accident had occurred. At this period, a wound of considerable size extended obliquely, about three inches in length, from the styloid process of the ulnar, upwards and outwards, towards the radius; being filled with large glassy granulations, presenting what is vulgarly called the appearance of proud flesh. So soon as pressure was taken from this wound, the bleeding immediately recurred; but not from any one point, so as to lead the surgeon to a bleeding vessel, but the blood seemed to flow from the whole surface.

Pressure, therefore, was again applied, by the dresser for the week; which was, however, required to be so strong, in order to stop the bleeding, that all sensation in the hand was soon lost; and it was therefore quickly removed. A tourniquet was then applied on the branchial artery, and Mr. Cooper was sent for.

Upon examination, it was found that pressure upon either the ulnar or radial artery singly did not check the hæmorrhage; but that a very slight pressure upon both, continued but for a short time, succeeded. Mr. Cooper, therefore, ordered a piece of cork to be placed upon the radial and ulnar arteries, about two inches above the wound, and to be confined in that situation by means of strips of adhesive plaster, with a degree of pressure not sufficient to prevent the flow of blood through them, but merely to diminish its volume: the hand, at the same time, was raised to an angle of 30° from the horizontal plane of his body, and directed to be kept cool, with evaporating lotion. This treatment most perfectly succeeded; and in the latter end of June he was discharged perfectly well.

Case 4.—*Malignant Tumour attached to the Femoral Sheath.*

Reported by Mr. John Springhall.

A. D., aged 58, a widow, never having had children, and of spare habit, was admitted into charity Ward on the 8th of July 1836: being the subject of a tumour situated at the upper part of the left thigh, which she had first observed about three years since. From that period, she said, it had gradually increased to its present size, being now as large as a goose's egg.

In appearance it was somewhat lobulated; and to the touch did not offer the same degree of hardness throughout its whole extent, although there was no tendency to fluctuation.

On giving a history of her case, she brought to Mr. Cooper's recollection, that she had removed, from the inner side of her left knee, ten years before, a small tumor, which Sir Astley Cooper had pronounced to be decidedly of a malignant character.

When admitted into the hospital her general health was so much impaired that it was thought advisable to improve her constitutional powers by alterative medicines; and it was not, therefore, until the 20th day of the month that it was considered proper to submit her to the operation, more especially as Mr. Cooper expected there would be some difficulty in the excision of the tumor, from the close proximity of it to the sheath of the femoral artery.

On proceeding to the dissection of the tumor from its situation, it was found completely implicating the fascia lata; so that the muscles of the upper part of the thigh were perfectly exposed, and a portion of the inner side was so firmly connected with the sheath of the femoral artery as to render it unsafe, if not impracticable, to dissect it from its attachment, so that a portion was sliced off from the tumour. The remainder was left attached to the sheath, and was afterwards included in a tight ligature, and was left to slough off, from the compression.

During the operation three vessels required ligature; for in consequence of their being cut through so near to the principal trunk, they bled very profusely; the edges of the wound at the lower part were then brought together by suture, and a dossil of lint was confined to the upper part of the wound by a bandage, for the purpose of suppressing the tendency to hæmorrhage, which still continued.

On the 21st she had passed a restless night, and complained of some slight uneasiness in her bowels; three drachms of castor oil and ten drops of the tincture of opium were therefore ordered immediately.

22. She had a more comfortable night; the bowels had been relieved by the castor oil, and she described herself as being perfectly free from pain. The dressings were removed, and the wound looked healthy, although there was little or no attempt at union by adhesion. A light bread-and-water poultice was

ordered to be applied, and saline medicine was prescribed.

23. There was no change in her condition.

24. At eight in the morning, a considerable secondary hæmorrhage occurred, but which was restrained by pressure; the bleeding appeared to arise from that portion of the tumor which had been left adherent to the sheath, and probably was produced by the ulcerative process succeeding the constriction of the ligature. From this period to the 28th the lint, by the pressure of which the hæmorrhage had been restrained, was not removed; when, upon taking it away, the wound was found to have put on a sloughy appearance, and a large quantity of fluid, having the appearance of dirty water, filled up the cavity. The countenance pourtrayed great anxiety, the tongue was brown and furred, and the pulse quick and feeble. Mr. Cooper visited her at 12 o'clock, and ordered the following medicines, and six ounces of wine daily.

Tinct. Opii ℥ss. statim.
Ammon. Carb. gr. v. Tinct. Cinchonæ ℥i. Tinct. Opii gr. xx. Decoct. Cichonæ ℥iss. bis die sumendus.

July 29. She was rather improved, but had been confused during the night, which was considered partly attributable to the influence of the opium.

30. Appears to be sinking; takes no nourishment, but drinks her wine. The bowels not having been opened since the 28th, castor oil was ordered. The edges of the wound had put on a gangrenous appearance.

31. She appeared to be in a collapsed condition; her tongue was covered with a thick brown fur; the pulse scarcely perceptible, and the teeth enveloped with sordes. In this state she continued until the evening of the 1st. of August, when she died.

REMARKS.

I consider this case particularly interesting, from the length of time which elapsed between the removal of the tumor from her knee and the recurrence of the disease in the groin. The opinion of Sir A. Cooper, as well as my own, as to the malignity of the first tumor, was strongly corroborated by the age of the patient, her never having borne children, and her general diat-esis—as well as, perhaps I may add, the great mental excitement she was constantly exposed to from the ill treatment of her husband, each of which are circumstances certainly to be considered as exciting causes to malignant growths. The tumor itself bore all the characters of scirrhous enlargement, some parts of it being softer than others, from commencing spots of ulceration.

OBSERVATIONS
UPON
THE CONSTRUCTION AND USE
OF THE
RESPIRATOR;

An Instrument for facilitating the respiration of Persons suffering under Pulmonary and Bronchial Affections, by warming the Air inspired, and thereby enabling them to breathe freely in the coldest Atmosphere.

By Julius Jeffreys, Surgeon.

The prevalence and fatality of diseases of the lungs in this climate, render every method of relieving them worthy of the attention of the physician. For success in our efforts towards this great object, it is necessary that their causes should be ever kept in view. Among the most influential, are those which act through the atmosphere we dwell in; such are its impurities,—its state as to drought and moisture, and as to heat and cold. It is well known that ordinary miasms, however injurious to the lungs indirectly. have less direct effect upon them, excepting in asthmatic cases, than might have been expected from their immediate contact with the lungs in respiration. Impure air, if warm, is often less injurious than the purest cold air.

The thermometric state of the air is, doubtless, that which has most influence over the actions of the lungs. Experience has shewn that sudden changes,* and a

* The far greater frequency of pulmonary consumption in England, than either in tropical climates, or, it is said, in the artic regions, would tend to shew that it is the sudden change, so frequent in our climate from warm to cold weather, and the sudden change from warm apartments to cold air out of doors, rather than any thermometric *extremes*, which are most injurious. It is still, however, the cold which is the cause of the mischief; though, as in the case of many other irritants, a little of it applied suddenly, and at intervals, may have much

low temperature, are the most frequent of all the causes of pulmonary disorder. In England, during the greater part of the year, the body is exposed to sudden, if not extreme cold, since people are frequently passing from warm apartments into the cold air, either in passages or out of doors.

It is plain, that cold air can act upon the body through two channels only, namely, by the surface of the body, and the lungs. The surface may be, and is by all prudent persons who have the means, well guarded against cold; but hitherto the lungs and throat have been unprotected, or screened in some way injurious to respiration.

The action of cold air upon the lungs is twofold. First, it proves *directly* irritating to the windpipe and air vessels, exciting the lungs of the invalid to that one of the numerous diseases of the lungs to which he is predisposed.—Secondly, cold air acts *indirectly* in a manner scarcely less injurious. Owing to the uneasiness which it occasions, the chest refuses to receive any more cold air than will barely suffice to support life, or than can be deprived of its chill in the mouth or nostrils. How many persons are there whose respiration is sufficiently free in the summer, but who are compelled to live upon a short, panting kind of breathing throughout the winter, during which time the lungs are never properly inflated, or if inflated it is by vitiated air; the air being very slowly changed where the inspirations are so short. However gradual in some cases, the certain consequence of this imperfect respiration must in time be a change in the structure of the lungs, independently of alterations of structure from other causes. They will lose much of their spongy texture. Some of their finer passages and cells will become obliterated by condensation and adhesions,—the natural consequence of want of use and irritation. The chief benefit of inhaling warm vapour arises, as the physician knows, more from the mechanical expansion the lungs are thereby subjected to, than from any medicinal action of the substances inhaled. All sufferers are familiar with the *direct* irritation of cold air; but this *indirect* effect is little observed except by the physician. It is a fact daily to be lamented, that transcendent as is the medical skill at command in England, it is often unavailing, owing to the constant opposition of so powerful a cause of disease as cold air applied at each inspiration to the passages and to the lungs. Could this cause be removed but for a time, many a patient would be enabled to appreciate aright the skill which had discovered the peculiar disease supervening, and which has now afforded an opportunity for the undisturbed operation of its remedies.

In considering cold as the grand atmospheric irritant, we must not overlook the injurious effects of dryness of the atmosphere, when combined with cold, in many affections of the lungs. A portion of the benefit of inhaling vapour is due to its humidity, as well as its warmth; and consumptive persons in general derive benefit from a moderately humid as well as a temperate atmosphere.

The above is an outline of the reflections which led to the construction of the Respirator, an instrument which, it is hoped, will prove of much use in affections of the lungs, by effectually guarding them against the action of cold. In searching after all means at command for effecting this object,—although the lungs cannot be clothed like the surface of the body, nor a stock of warm air carried about by a person,—a source of warmth presented itself, abundant in amount if the heat could be caught, and the rightful property of the lungs, inasmuch as it is generated by the lungs themselves. The lungs are continually giving out the warmth which might save them from destruction, but to no purpose, for it is carried out in the breath, and lost in the air around. The air which issues forth at each expiration, contains more heat than enough to warm the following inspired air. To transfer the warmth from the former to the latter became the grand desideratum, for which object some instrument was required. To do it successfully, this instrument had to be worn on the face, to catch with rapidity all or nearly all the heat of the breath as it issues forth, to store this heat up, and deliver it to the fresh air

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more effect than a greater degree, acting gradually and steadily. Because, on this account, some climates, colder than England, may not excite disease so frequently in the lungs, it would be absurd to conclude against the experience of every day,—against the feelings of every sufferer,—that cold air in England is not mainly contributable to pulmonary disease; yet there are persons to be met with who draw this conclusion, and that, too, in the medical profession!

next drawn in, in order that it might enter the mouth or nostrils comfortably warm.

While these positive properties were necessary in the instrument, it had to possess, also, certain negative ones, without which it could not be employed. In the first place, while drawing from the air its heat, the instrument must not, in any appreciable degree, impede the exit of the air; and in giving heat to the returning current, it must not obstruct its entrance; respiration, in short, must not be rendered at all more laborious. In the next place,—if possible, the vibrations of the air, which constitute sound, must not be checked, for the instrument ought not to obstruct the voice in speech. Again, it must not be of any larger size than can be made to answer the purpose, since it is to be worn on the face. Lastly, it must be very simple, durable, easily employed, and moderate in price. Some nicety of construction was requisite for combining successfully so opposite properties in a small and simple instrument.

The following deductions from the known properties of matter afforded data upon which it was easy to proceed with confidence of a successful result.

In the first place, the lightness of air is such, that sixteen grains may be taken as the full weight of the air of each respiration. Secondly—The capacity of air for heat is small, so that any substance which is to take up the heat of temperature of sixteen or twenty grains of warm air, need not itself weigh much. Thirdly—Though air is a bad conductor of heat, its ready divisibility affords a way of exposing simultaneously all its parts to the action of the substance which is to conduct off its heat. Fourthly—Its mobility and elasticity, together with this divisibility, are so complete, that they enable it to pass readily through very small apertures, if these apertures are not long or tubular; and as these apertures (for the purpose of the third indication, *i. e.* for rapid conduction), must be very numerous, the motion need not be perceptibly obstructed. There may even be many layers of the conducting substance, provided the layers be very thin. Fifthly—Not only may the ready passage of the air be thus secured, but even those minute vibrations in it, which constitute the voice, may be preserved, if the conducting substance it traverses be metalic. Air will not have its most delicate vibrations disturbed by passing through well-stretched metallic layers, however small the apertures. Whereas by plates or threads of fibrous substances, as paper or parchment, which become relaxed and then vibrate irregularly to the vocal sounds, the voice is deadened. Sixthly—As for the vocal effect the conducting substance ought to be metallic, so does the main principle of its action require that the despository of the heat should be formed of matter of the best conducting power. Hence, on this account, also, it must be of metal. The two indications are thus in happy accordance; and the precious metals, as possessing a high conducting power, and being incorrodible, have been employed. Seventhly—Since the temperature of any one substance must be lower than that of any other before it can receive heat from the latter by conduction, it is plain that a single layer of metal could only take a part of the heat from the breath; even if the contact were of longer duration than it is, the breath, it must be carried through another layer of metal, which being much colder than itself, can abstract heat from it. As the breath and this second layer approach towards the same temperature, this second layer will not be able to abstract more heat from the breath. It must, therefore, pass through a third still cooler layer, and, for the same reason, through several. In practice, six or eight will not prove too many, and in the coldest weather double that number may be employed. In this series of laminæ, each is warmer than the one in front of it, from the exterior one, which is nearly of the temperature of the atmosphere, to the innermost one, which is perhaps within ten or fifteen degrees of the breath. These laminæ would not remain one instant of time at so different states as to heat, if they were placed in contact with each other. In order to preserve the progressive difference in their stocks of heat, they must be kept apart; and it will be found, that during the short peeiod of one respiration, a very small separation will suffice for the purpose. An interval for each of one fortieth of an inch, including the metal, is more than enough; six or eight layers may therefore lie in one eighth of an inch. These layers having been warmed during an act of expiration, and being each warmer and warmer as they lie nearer the mouth, are enabled to give heat in the most advantageous manner to the fresh air entering from without, which takes up a parcel of heat in tra-

versing each; since, although it grows more and more warm, it is sure to find every layer it comes to warmer than itself, which is, of course, a relative condition necessary for the communication of heat to the air.

Lastly. Not only must the conducting metal be divided into distinct laminæ, that air of different grades of temperature may continue subject to its operation, but in each lamina the metal must be reduced to a state of great extenuation, and be placed in such a manner as to effect the utmost possible division of the breath, so that every particle of it almost may impinge against metal, yet that the passage of the air shall be abundantly free, in order that there may be no perceptible obstruction to the progress of the breath.

The Respirator has been constructed with minute attention to the above rules. It consists of two parts—the operative part represented by fig. 1, in the plate, and the case for holding it mounted with its silken attachments, seen in fig. 2. The former, fig. 1, consists of a packet of lattices, or small frames of silver, kept apart by other similar lattices of a waterproof substance. These last lattices serve as imperfect conductors of heat for keeping the silver lattices apart. The silver lattices are overlaid with gold wires on both sides. The wires on those nearest the mouth are one three-hundredth of an inch thick, and one three-hundredth of an inch apart. On the outer lattices they are about one six-hundredth of an inch thick, and one six-hundredth of an inch apart. The packet, fig. 1, is made up of from four to ten of these lattices, carrying from eight to twenty layers of wire, with a non-conducting lattice between each skein. The packet is arched to suit the curvature of the mouth. It is lodged in the case, fig. 2, which it exactly fits every where but behind, next the mouth. Here there is a small space behind the packet after it has passed from the mouth. The case is so forward as to collect any moisture condensed from the breath, and to deposit it in a strip of sponge fixed in the lower part of the case. It is only necessary to open the case and remove the packet of skeins once a day, in order that the interior of the case and the sponge may be dried with a handkerchief. Occasionally the packet itself and the sponge may be removed, and rinsed in warm water. Fig. 3, is the front cover of the case, so made as to accommodate a single or double packet behind it.

The instrument is of two kinds; one, the oral is adapted to the mouth alone; the other, which may be named the orinasal, has a communication with the nostrils, as well as the mouth, to suit the convenience of persons who have not acquired the habit of breathing chiefly through the mouth. Figs. 4, and 5, are different views of an orinasal; and figs. 6, 7, and 8, represent an oral Respirator mounted with a covering for the sides of the face, to be worn by invalids and other persons who are desirous of protecting the face from cold while travelling on coaches, or in open carriages.

It is a curious fact in physics, the application of which is of much importance, that heat may be instantaneously separated from a body of air, by means which need not in a perceptible degree disturb its mechanical condition. Thus, in the present case, the Respirator draws off the warmth of the breath without any mechanical effect perceptible by the individual who put it on, or by those whom he may be addressing in the lowest tone of voice. Both his respiration and speech are unaffected by it, while it affords a grateful warmth to the inspired air. *Now this is the chief object for which invalids suffering from pulmonic affections are sent to milder climates* It is of great importance that the warmth it communicates should be distinguished from that of a close carriage or confined apartment, where the warmth arises from the repeated admixture of warm, stale air, vitiated by being frequently respired, with a proportion of fresh air. To avoid a respiration rendered painful and imperfect by chilling air, the sufferer has to bear one rendered laborious and unhealthy by impure tough warm air. But when the respirator is employed, the impure air from the lungs is entirely void at each expiration. The compass of the whole being trifling, it may be said, that nothing* is retained but the heat;

* That no impure air worthy of consideration is detained by the Respirator will be obvious to every reflecting phisiologist. The whole internal space of the instrument unoccupied by metal, &c., does not exceed three quarters of a cubic inch, which could not give lodgment to a larger quantity than one two-hundredth part of the vitiated air detained in the chest of every grown person at the close even of an act of ordinary expiration; or, according to the experiments of some physiologists, who state that more than two hundred cubic inches of air are de-

and this heat, by tempering the air drawn in, permits the sufferer to breathe freely out of doors. Hence, when in bed in a cold room, or when abroad in the open air, he is enabled to expand his lungs without uneasiness, and to inhale more and purer air than he could by any means obtain without the instrument. And since it is necessary in this climate to warm our apartments, there do not appear any other means by which an invalid can guard himself against the effects of sudden vicissitudes in passing through the colder parts of a house (not to mention the outer air), than by having a Respirator at hand, which may be placed over his mouth in moving from one apartment to another.

A remarkable and important effect of the respirator remains yet to be noticed, namely, that while it warms the air entering the chest, it also saves to the system nearly all of the heat usually carried away by the breath. It is a question, whether the heat lost in ordinary respiration may not equal in amount the heat given off from the surface of the body, in England, where, in cold weather, the conduction of heat from the surface is moderated by warm clothing; whereas in twenty-four hours about fifty-pounds weight of cold air are drawn into the lungs, and raised from a low temperature up to about 100o of Fahrenheit's scale.* Whether the heat requisite for raising fifty pounds weight of air from the freezing temperature to 100_0 be equal in quantity, or not, to that lost from the surface of a well clad human body in twenty four hours, it must prove a large draught upon the calorific powers of the animal system. Now it must be evident to the phisiologist, that the heat which is thus lost from the pulmonary surfaces would otherwise circulate with the blood and be diffused over the whole body. The chilly state of the surface, and the cold extremities, of invalids suffering under pulmonary affections, indicate a need of such a recovery of the animal heat. The Respirator promises to effect this recovery. Of all the heat generated in the lungs, but a small part being now lost in respiration, much more of it must remain in the aterialized blood, and be conveyed in the blood to the distant parts of the body. We may then then expect the Respirator not only to make easy the respiration of the traveller, in winter who wears it, but, after a time, to diffuse also a grateful feeling of warmth over the extreme parts of his body, derived from heat, which, without the instrument, would be stolen by the breath, and cast away into the atmosphere unemployed.

The instrument has been found by all who have employed it to answer the expectations held out by the inventor in every respect. It is hoped, therefore, that it will prove of much value to the public, by affording ease to a numerous body of invalids, and comfort to travellers,—giving rest at night to many who are now disturbed by inhaling cold air, enabling others to follow without injury their vocations abroad, and many others to enjoy fresh air and exercise, at present denied to them. To the physician it promises to be equally useful, by removing a disturbing power, which too often renders unavailing his remedial measures, how judicious soever they may be.

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tained in the lungs, the portion of the fraction in the instrument must be even less than the two hundredth part. Where the quantity of the air in the instrument is so minute a part of the whole detained, it may be affirmed practically, that the breath is as completely voided when the instrument is on, as when it is off.

* The heat lost by the evaporation of the cutaneous exhalations is a question distinct from the present, and does certainly not exceed that absorbed in the evaporation of the pulmonary exhalations.

DISPENSARIES IN IRELAND.

It is painful to notice the working of the new Grand Jury Act for Ireland, which we are about to submit to our readers, as it is framed on the same plan as the New poor Law Act in this section of the empire. It really appears as if the legislature was determined to crush the profession of medicine, while the interests of other learned faculties are promoted on every occasion. This will be the case until the medical profession is represented in the House of Commons. It affords us much satisfaction to observe the following resolutions :—

DISPENSARY PRESENTMENTS IN IRELAND.

The following important document has just reached us, and we hasten to give it the earliest publicity, knowing the anxiety which prevails on the subject of Dispensary Presentments at the ensuing

Spring assizes. It strikes us that any bill brought in for the repeal of the complained-of proviso, should extend also to the Summer Assizes, as many Dispensaries will then be presented for. The Dispensary Superintendents owe much to the Committee, who have so zealously watched over their interests.

Dublin, Nov. 30th, 1836.

We, the undersigned, heving been deputed by the Physicians and Surgeons of the Counties of Cork and Tipperary, to wait on Lord Morpeth, with a view of inducing his Lordship to procure a repeal, or a satisfactory modification, of the objectionable Dispensary provision in the 81st clause of the new Grand Jury bill, and to make such further representations as the state of the medical institutions of Ireland might appear to us to require,—feel great pleasure in reporting that the objects of the deputation have been accomplished to our fullest expectations.

On learning our views, and being put in possession of the documents which we had the honour of laying before Lord Morpeth, his Lordship at once consented to introduce a bill early in the next session, by which the provision alluded to will be repealed, and power given to Grand Juries, at the next Spring Assizes, to grant any sums that may have been passed at the previous presenting sessions. This will remove the many difficulties which would otherwise take place, and will allow all the Dispensary presentments to be passed at the ensuing sessions and assizes, in the same manner as if the complained of enactment had not been made. But, as this bill only proposes to meet the present difficulties, the chief Secretary has further expressed his intention to introduce another, for the improvement and better regulation of the medical institutions of Ireland, in the course of the same session; and, in the mean time, his readiness to receive any well considered suggestions which the deputation may be prepared to offer, to afford an opportunity of supplying his lordship with such useful information, as many members of the Irish medical profession are supposed capable of giving.

We cannot close this report without congratulating those by whom we have been deputed, as well as the Physicians and Surgeons of the other counties, on the favourable prospects thus held out to them, nor, without expressing a most earnest hope, that they will promptly and judiciously avail themselves of the opportunity now presented, to obtain such legislation as may be satisfactory to the profession, and will place the institutions for the relief of the sick poor under such an improved system, as will be most beneficial to them and to the public.

For the very courteous reception given us by Lord Morpeth, we beg leave to express our most grateful thanks, as well as our grateful acknowledges on the part of the profession, for the very warm interest evinced by his Lordship in forwarding the objects of our mission.

DENIS PHELAN, Clonmel.
J. F, PURCELL, Carrick-on-Suir.
M. D. NUGENT, Cork.

DOUGLAS DISPENSARY.

At a general meeting of the subscribers to the Douglas Dispensary, holden on Friday, November 25th, to take into consideration the concluding proviso of the 81st clause of the New Grand Jury Bill;

Wm. Ed. Penrose, Esq. in the chair;

The following resolutions were unanimously adopted:—

Resolved, 1. That we regard the establishment of dispensaries in this country as productive of incalculable benefits to the "Sick Poor," and as deserving the support of every humane individual.

2. That deeply impressed with such feelings, we cannot avoid viewing with astonishment and regret the proviso contained in the 81st clause of the New Grand Jury Bill, considering such an enactment as directly calculated to withdraw the attendance of the active and respectable physicians from these institutions, and thus inflict a grievous injury upon the poor.

2. That, as the drugs for these institutions are purchased at wholesale, or trade prices, and as their value is small until compounded by medical officers, who thus, in addition to their other duties, perform those of the apothecary, we consider that sufficient remuneration should be allowed for this extra labour, by which an abundant supply of genuine medicine for the poor is obtained at the cheapest possible rate. That further: taking into account the duty imposed on a dispensary physician, of visiting the sick poor at their own houses, which must necessarily entail upon him a certain expense, we are very far from considering that too large a proportion of the funds of these charities is allocated as Salaries to the Medical Officers.

4. That we consider this Clause as not only harsh in its operation upon the medical attendants of dispensaries, but also an infringement upon the rights of the subscribers, who contribute in a double capacity to the support of these institutions by their VOLUNTARY contributions, and through their quota of the public assessment, and who naturally ought, from their local knowledge, to be the best judges of the extent of remuneration their medical officers should receive.

5. That EDWARD PENROSE, Esq., T. S. REEVES, Esq., W. ROBINSON, Esq., and the SECRETARY, be appointed as a Committee to prepare a petition to Parliament, in the spirit of the Resolutions praying a repeal of the obnoxious Proviso, and that our City and County Members be requested to support its prayer.

EDWARD PENROSE, Chairman.
EDWARD LUCETTE, Secretary.
November, 29, 1836.

BANDON DISPENSARY AND FEVER HOSPITAL.

AT a general meeting of the subscribers to the Bandon Dispensary and Fever Hospital, held on Thursday, December 1st, 1836,

The Provost in the chair,

The following resolutions were unanimously adopted relative to the concluding proviso of the 81st clause of the New Grand Jury Act.

1. Proposed by Maskelyne Alcock, Esq., of Roughgrove, and seconded by Edward Doherty, Esq.;

"That we have read with much surprise and concern the concluding proviso of the 81st clause of the New Irish Grand Jury Bill, viz., 'And provided also, that no such presentment shall be made in case it shall appear that the salary of the medical attendant during the last year, amounted to one half of the sum to which the subscriptions, donations, and the sum presented would amount;' and that we are of opinion that this proviso, if not speedily repealed, will have the effect of annihilating many, and materially impairing the efficiency of most of the dispensaries in Ireland, thereby depriving the sick poor in many country districts of medical and surgical relief."

2. Proposed by James Scott, Esq. and seconded by Joseph T. Wheeler, Esq.;

"That the expenses of medicine and other necessary charges by no means require so large a sum as the surplus would amount to, from the effect of the above proviso, and that the local subscriptions in many country districts would not afford an adequate salary to any medical gentleman for the various fatiguing duties of his office."

3d. Proposed by Colonel Clerke, and seconded by George Dowden, Esq.;

"That our Committee be requested to draw up petitions to both houses of parliament, praying for the speedy repeal of the obnoxious proviso, the one for the House of Lords to be entrusted to the Right Hon. the Earl of Bandon, and that for the House of Commons to Mr. Sergeant Jackson, M. P., with a request that they will be kind enough to support them at the earliest possible period next session.

4. Proposed by the Rev. H. M'Clintock, and seconded by the Rev. W. Molesworth;

"That the above resolutions be published in the Cork newspapers for one post each."

The Provost having left the chair, and Colonel Clerke being voted thereto, the thanks of the meeting were returned to the Provost for his dignified conduct in the chair.

St. J. A. CLERKE, Chairman.

VALUE OF MR. ALEXANDER URE'S REFUTATION.

SIR,—According to Dr. Johnson, the word "Refutation," means "to prove false or erroneous any faults:" Mr. Alexander Ure's letter is neither a *refutation* nor reply to my letter of the 24th of December last. What I advanced is neither *refuted* nor answered. Mr. Alexander Ure throws new materials into the discussion, and seems as much afraid of dates as a person with hydropobia of water. Has Mr. Alexander Ure refuted my statement, that as early as February 1835, I imparted to him my views respecting the chloride of zinc?—*No.*

Has Mr Alexander Ure denied my lending him two volumes of the Encyclographie containing the debates of the Academy of Medicine, relating to Mr. Canquoin and the Chloride of zinc?—*No.*

Has Mr. Alexander Ure brought forward dates to prove that he had a correspondence with Mr. Nonat previously to my correspondence with Mr. Mollerat whose original letter I sent you?—*No.*

Has Mr. Alexander Ure proved that he was not in my library *alone* every day during three weeks?—*No.*

Has Mr. Alexander Ure proved that he made experiments in the hospitals before the 10th of October 1835?—*No.*

Mr. Howship gives no precise date, and merely names the month of November in which there are thirty days.

Has Mr. Alexander Ure proved that his Mixture of chloride of zinc with gypsum was better than Mr. Canquoin's paste?—*No.*

What then does Mr. Alexander Ure call a refutation? From the tenor of Mr. Alexander Ure's letters, I necessarily take it for granted, that he at last acknowledges that *he did not introduce ths use of chloride of zinc into this country,* and the dates I have brought forward prove that I have the priority to Mr. Alexander Ure who *now* merely claims the mixture of chloride of zinc with gypsum.

As I have never attempted to deprive Mr. Alexander Ure of his gypsum, I am by no means under the necessity of answering his questions though he is bound to answer mine. I am quite willing, however, to reply to his observations respecting Mr. Canquoin's, the 30,000 francs, not 50,000 as M. Alexander Ure states: I refused to enter into any treaty with Mr. Canquoin, not because *I detected the secret* as Mr. Alexander Ure asserts: but because I object to secrecy, the best proof of which is my application of the paste at St. Bartholomew's hospital, but it does not suit Mr. Alexander Ure to understand this fact. The result of Mr. Alexander Ure's remarks, is probably a secret, as he continues to allege that he *cures cancer by chloride of zinc alone,* which neither Mr. Canquoin, myself, or any other professional man ever professed to do.

Mr. Alexander Ure has refuted his own indelicate assertion, respecting secret diseases: as the only patient confided to him was a child who had the chicken pox.

Is it possible that Mr. Alexander Ure has not earlier learnt that nearly all strong and concentrated acids coagulate albumen, that it is chlorine or muriatic acid that coagulates albumen; thus the power of coagulating is common to other chlorides! What priority can Mr. Alexder Ure claim when Dr. Bostock has so long since published his experiments on the coagulation of albumen by a drop of a saturated solution of corrosive sublimate. Mr. Alexander Ure attempts to prove that the corrosive nature of the chloride of zinc has been known in England for the last twenty-four years; but if it was known at that time, is it not astonishing that this power of the chloride of zinc has been overlooked by him and many others, and that no mention of it is made, even in the last edition (1835) of Dr. Andrew Ure's celebrated Dictionary of Chemistry, but I can tell Mr. Alexander Ure, that Velpeau says chloride of zinc was known in the thirteenth century; perhaps Mr. Alexander Ure may be inclined to carry his pretensions to priority beyond that remote period.

I now once more beg to state, that in June 1835, I went to Paris expressly to observe the effects of chloride of zinc, on cancerous patients; that on my return to England I applied the paste publicly in the hospital. I did so quietly and without ostentation. I concluded my memoir rapidly when I accidentally learnt that Mr. Alexander Ure intended to deprive me of the merit (however trifling it may be) of introducing chloride of zinc into English practise.

But while I was acting thus, what was my ex-kind friend Mr. Alexander Ure doing? Running over London proclaiming *his* discovery. With amazing rapidity he flew from St. George's to Guy's, from Westminster to the North London Hospitals, boasting of his *researches* which consisted in the translation of a memoir—of his *discovery,* which consisted in mixing gypsum with chloride of zinc.

Surely no one can doubt Mr. Alexander Ure's claim to the *ridiculus* of the *parturiunt montes* with which Mr. Alexander Ure will be delivered to posterity; I shall now merely add, that if Mr. Alexander Ure *can* prove he introduced the chloride of zinc into England, he should do so: until then I shall take no further notice of his communications to you.

I remain, Sir, very faithfully yours,

BUREAUD

22, Newman Street, Oxford Street,
3d January, 1837.

MANCHESTER ROYAL INFIRMARY

THE

London Medical and Surgical Journal.

No. XX. SATURDAY, JANUARY 14. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. V.

Respiration [*continued.*]

Analogy between the Lungs and Liver, and Carbonic Acid and Bile.—Case of Red Blood turned Black in the Lungs.—Quantity and weight of Air absorbed in Respiration, and of Carbonic Acid given out.—Carbon probably not a Simple Substance.—Quantity of Blood passing daily through the Lungs.—Circumstances which lessen the Consumption of Oxygen, and increase the Size af the Liver.—Coagulatin of the Blood.—Reason why it does not take place while Circulating.—No fibrin in reality in Circulating Blood.—Chyle never Analyzed.—Difference between Arterial and Venous Blood.—Animal Heat. Ancient Opinions.—Theories of Galen, Sylvius, Crawford, De la Roche, Sir Humphrey Davy, Brodie, Boerhaave, Bichat, Wilson Phillip, Boyd, Pring, and Holland.—True Explanation of Animal Heat.—Heat is Evolved not Created.—Secretion of Carbonic Acid really produces Cold.—Analogous production of Light and Electricity. All the consequence of Diminished Capacity.—Luminous Matter, not Light Secreted.—Animals which produce it.—Summary of the Uses of Inspiration.—Expiration in Plants and Insects.—Stimulus to Expiration.—Nerves of Expiration.—Muscles of Expiration.—Elasticity of the Lungs.—Muscularity of the Bronchia.—Opinions of Carter, Reisseissen, Everard, and Williams.—Expiration not Passive. Mechanical and Physiological Effects of Expiration.—Preponderance of Inspirations or of Expirations.—Difference between a Stimulus and a Load.—Injurious Effects of Sighing.—Beneficial Effects of Laughing.—Influence of Public Amusements on the Public Health.—Effects of Sobbing, Crying, Singing, and Reciting.—Long Lives of Professors, Schoolmasters, and Public Singers.—Daily Amount of Halitus and Perspiration.—These Secretions Vicarious of each other, as Bile is of Carbonic Acid.—Reason why Heat produces diseases of the Skin and Liver.—Lavoisier's Chemical Theory of Respiration.—Great Heat sometimes endured by the Living Body.—Blagden and Monsieur Chabert.—Fish in Hot Springs and Volcanoes.—Preservative in these Cases.—Respiration of the Fœtus.—Opinions of Arantius, Harvey, Munro, and Williams, on the Placenta.—Compression of the Umbilical Cord does not Directly stop the Fœtal Circulation.—The Skin, and, probably, all the Mucous Membranes, are Respiratory Organs.—No proper Circulation in Plants and Zoophytes.—Difference of Structure and Function between Ascending and Descending Vessels.—Analogy of the Former to Veins, Lymphatics, and an Intestinal Tube.—Four Earliest Forms of Circulation in Animals.—Heart in the Invertebrata.—Veins and Arteries without a Heart.—Cæca, Dorsal Vessels, and Spiracles.—Instance of the Rectum passing through the Heart. Circulation in Insects, Reptiles, and Fishes.—Single and Double Hearts.—Osseous and Cartilaginous Fishes.—Size of the Heart compared with that of the Body.

The pulmonary veins resemble the veins of the *porta;* and carbonic acid is as much the product of secretion in the lungs as the bile is in the liver. Had it been *liquid* instead of *gaseous,* no one would have doubted its being a secretion; but gases, both in the intestines and elsewhere, have been shewn to be as much the product of secretion as liquids. The formation of arterial blood, by the absorption of oxygen, is therefore a supernumerary function, to which the liver presents nothing similar. The secretion of the liver abounds with carbon in union with *hydrogen;* and in the secretion of the lungs carbon is

united with *oxygen*. The loss of bile does not make the blood of the liver red; and probably the evolution of carbonic acid does not make the blood of the lungs red either; but the loss of carbonic acid makes the blood inclined to absorb oxygen, thus imparting to it a susceptibility; for all evacuations from the blood increase absorption. How is it that the *bronchial* arteries, which go the same parts as the *pulmonary*, have their *red* blood turned *black;* while the latter have their *black* blood turned *red?* It it is probably a vital process; not to be explained on mere chemical principles

About eight cubic inches of air are taken in at one inspiration; or about 160 in the minute. Of this quantity about one-fifth is absorbed; so that 32 cubic inches are absorbed in a minute, and about 40,000 in twenty-four hours. The weight of this quantity of atmospheric air is 27 ounces, and that of the same quantity of carbonic acid 38 ounces; so that 11 ounces of pure carbon are lost in the process. Where this comes from is quite inexplicable. It is probable that carbon is not a simple substance; but it is secreted in the body.

To absorb these 27 ounces of oxygen, and to secrete these 38 ounces of carbonic acid, fifteen pounds of venous blood pass through the lungs in the twenty-four hours; so that the quantity of either in any portion of the blood must be very small, and hence may not be detected. For the same reason we must not expect to find any very great chemical difference between arterial and venous blood. An ounce of arterial blood would not contain one-twelfth part of a grain of oxygen more than venous.

The following circumstances are those in which the least oxygen is consumed in the process of respiration:—1 Night. 2. Summer. 3. Warm climates. 4. Rest. 5. Wine. 6. Mercury. These are precisely the circumstances which make the liver grow larger. Hence the advantage of early rising, exercise, &c.

The blood appears to coagulate from the central nuclei losing their coloured envelope. The blood does not coagulate while in the body, because it never remains identical for three minutes and a half together. The chyle has never been analyzedin man; and the chemical nature of the blood, while circulating, is not known. It contains no fibrin or it would coagulate. While thus ignorant, it is useless to speculate as to the differences between arterial and venous blood. What we know on the subject is as follows:—I. *Arterial blood,* coagulates *quickly, odorous,* of a *scarlet* colour; temperature a hundred and *four* degrees (Farenheit); specific gravity a thousand and *forty-nine.* 2. *Venous blood,* coagulates *slowly, inodorous,* of a *purple* colour; temperature a hundred and *two;* specific gravity a thousand and *fifty-one.* chemical heat is probably owing to the greater heat of arterial blood. Caloric must tend to an equilibrium at the surface, but all parts of the body are generally maintained at a pretty equable temperature. This heat was once thought to be identical with life; that it held its seat in the ventricles of the heart; and that the use of respiration was to introduce cold air, with which the ventricles were to be fanned by the auricles. Air was afterwards thought to be brought in by the lungs, for the purpose of filling the arteries, which were then thought to contain air. Galen thought there was a combustion in the lungs of "the impure spirit of the blood;" and that the trachea acted as a chimney. Before this process took place the blood was called *natural,* and afterwards *vital;* and Galen said the latter was circulated by the arteries; for he was the first to shew that the arteries contained *blood* instead of air; although he still thought the blood was *mixed* with air. Sylvius thought the bile contained sulphur, which was carried to the heart, and burned there; and that thus animal heat was maintained.

By the union of carbon and oxygen carbonic acid is produced; and its weight is equal to that of both its constituents. Its specific gravity, therefore, is much greater than that of either of its constituents; and as the capacity of bodies for caloric is in the inverse ratio of their specific gravity, this increase of specific gravity must lessen its capacity for heat, which must therefore be disengaged. Now if this takes place in the lungs, they should be hotter than other parts of the body; and to explain why they are not so, Crawford said that *venous* blood has a less capacity for heat than *arterial;* and that therefore heat was given out, as arterial blood gradually became venous, in all parts of the body. This was the most beautiful theory ever propounded.

In the dormouse, and other hybernating animals, the temperature sinks in the exact ratio of the diminished quan-

tity of oxygen they consume. It is the same with a fresh egg, which resists frost much longer than a stale one. De la Roche and others have computed that carbonic acid has a *greater* capacity for heat than its constituents; and Sir Humphrey Davy sometimes found that arterial blood had a *less* capacity for heat than venous. But Brodie found that on killing an animal, and keeping up artificial respiration, the animal quickly became cold, although he had done all that Crawford said was necessary for maintaining the animal heat. The former considers that the temperature depends on the nervous system. Boerhaave said that animal heat was produced by the friction of the blood against the internal surface of its vessels; but liquids never produce heat by friction. Bichat thought animal heat was dependent on nutrition; liquids becoming solid when absorbed from the alimentary canal, and having then a less capacity for heat. But in the same process solids are turned into fluids; so that the effects are mutually counterbalanced. Wilson Philip considers it a proper secretion. Now it is easy to see how bile or carbonic acid can be secreted from elements existing in the blood; but what do we mean by secreting a simple body? Out of the body, heat always arises from the loss of capacity for caloric. We cannot *create* or *generate* heat; we can only *involve* or *extricate* it. Boyd says it is the sum of the functions which constitute life; and Pring styles it a part of the principle of life—unmeaning strings of words.

Crawford's theory is the only probable one I have yet mentioned, and yet I am not at all satisfied to adopt it. I think the secretion of carbonic acid, as does every other gaseous secretion in the body, must give rise to *cold* instead of heat. But if oxygen be conveyed into arterial blood, it makes a transition from a specific gravity of a thousand and eleven (as compared with atmospheric air taken at a thousand) to a specific gravity of a thousand and fifty-one (as compared with water taken at a thousand); and we should gain more heat in this way, than we lose by the formation of carbonic acid. This is probably the true source of animal heat; for this increase of density would allow for the extrication of about two degrees of heat in the whole mass of blood, which we may reckon at thirty pounds; and this temperature would be diffused over all the body every three minutes; that being the time we may allow for the whole mass of blood to pass through the lungs. This is Holland's theory; and is quite accordant with the fact, that the heat of animals is in proportion to the oxygen they consume; and also with the fact that the *halitus* secreted is a source of cold.

As the production of light, electricity, and heat, seems to be from analagous powers in the animal frame, if we could tell how the two former are evolved, it would probably help us to determine the source of the latter. Light is produced by about four kinds of insects; and has its seat in a vesele, in different parts of their body. It is illuminating *matter* which is secreted, and not *light* itself; the latter being a simple element. In the torpedo, the apparatus which produces electrical phenomena, is compared to a voltaic pile; and in the electrical eel, to a galvanic trough. In all these cases the production, whether of light, of heat, or of electricity, seems to depend on diminished capacity.

The uses of inspiration, then, appear to be the following:—1. To allow blood to enter the lungs. 2. To change venous blood into arterial. 3. To extricate not generate, animal heat. There are others which we may enumerate, but need not examine more particularly. 4. To give a stimulus to the peristaltic action of the intestines, and to assist the various actions of the abdominal viscera, by the descent of the diaphragm. 5. To assist the sense of smelling by producing a current of air through the nostrils. 5. To fix the chest, and thus allow innumerable muscles to come into action.

II. *Expiration.* In plants and insects, this is probably the only active part of respiration. The trachea of the latter is capable of contraction; but inspiration seems to be the result of its elasticity. The first stimulus to expiration appears to be the presence of carbonic acid and halitus, in the air cells of the lungs. This primary irritation is conveyed to those muscles which minister to expiration. It is curious that this irritation, though of a different character from that of *inspiration*, should be conveyed by the same nerve, the *par vagum*, but not more curious than that irritating the *portio dura* by *water*, should act on the muscles by *gasping*, while acting on the same nerve by *snuff*, acts on the muscles by *sneezing*.

In an ordinary, natural expiration, the muscles employed are probably only the sterno-costal, and the abdominal. If the

effort be stronger, we bring into action the *scalenus posticus inferior*, the *sacro-lumbalis*, the *longissimus dorsi*, the *quadratus lumborum*, &c. The obliquity of the abdominal muscles is probably designed to effect a greater extent of motion, though with less force. As the cartilages of the ribs are twisted in *inspiration*, they probably contribute by their elasticity to *expiration*. The posterior mediastinum is said to contribute to expiration, by returning to its natural state after being stretched by the depression of the diaphragm in inspiration; but its influence probably is not great, as it is attached chiefly to the *tendon* of the diaphragm.

The lungs themselves may act by their elasticity, or by the contraction of their bronchia. If the latter are muscular, their contraction will promote *expiration*, and the elasticity of the lungs, by counteracting this, will tend to assist *inspiration*. Carter says that the elasticity of the lungs ministers to *expiration*, as is proved by their collapsing when the chest is opened by a wound. But Reisseissen, Everard, and Williams maintain, that although the lungs *collapse* in these circumstances, they are not *at rest*, but continue in motion, from the action of the bronchial muscles. If the ducts of the liver expel the bile by means of muscular fibres, analogy would lead us to expect, that the ducts of the lungs would expel the carbonic acid, by the aid of muscular fibres too.

Expiration, then, does not seem to be more passive and less important than inspiration; but rather the contrary. The fact that an animal dies during inspiration, confirms this, for the most powerful actions are those which are longest continued. The mechanical effects of expiration are, 1st, The egress of air from the lungs. 2. The ready transmission of blood from the lungs to the heart. 3. A turgid state of all the system of the *vena cava*, for which reason it is in expiration that venous pulsations are evident. All the functions are most energetic during expiration; the heat of the body is greater, the pulse quicker, and the mind more vigorous, and although the difference may not be perceptible in an individual act of respiration, yet it is very observable if the expirations or inspirations preponderate for any length of time. The same quantity of blood goes to the heart in both cases, but in the latter it acts more as a *load* than as a *stimulus*, while in the former more of its surface comes into contact with the heart. The two are well illustrated by the different modes of putting fuel on a fire. A large quantity put on at once acts as a *load*, and is not so advantageous as a small quantity put on frequently. Here it acts as a *stimulus*. The heat of the body, and all the functions of the animal economy, may be diminished, by taking a few deep inspirations. Hence, sighing is a *cause*, as well as a *consequence*, of low spirits, and laughing evidently does good. Sydenham observed that the health of a village was often improved by the arrival of a merry-andrew; and Pott said he was always better for a fortnight after laughing at the farce of "the tailor riding to Brentford." On the same principle depend the advantageous effects of sobbing and crying, in small sickly children. School masters are proverbially long-lived; their continual speaking compensating for their sedentary occupation. The singing of boisterous songs, or the spouting of plays, is sometimes a very good remedy for dyspepsia. These methods were used by the ancient Romans, and I employ them in summer, when, from want of speaking, I am never so well as in winter. Public singers (if temperate), professors of Universities, and others engaged in similar occupations, are long-lived.

The halitus of the lungs generally amounts to about ten ounces daily, and the insensible perspiration to about forty. The halitus of the lungs is from the bronchial arteries. The secretion of the *skin*, is vicarious of the *halitus* of the lungs, as the secretion of the *liver* is vicarious of the *carbonic acid* of the lungs. Hence diseases of the skin and of the liver, are worse in hot climates and in hot weather. Lavoisier thought that the carbon given out in the lungs was carburetted hydrogen; and that it formed water and carbonic acid in respiration, just as a candle does in combustion. But all the oxygen which is absorbed in respiration, appears again in the carbonic acid; so that there is none left to form water. As we are obliged, then, to give up one part of the chemical theory, why should we not give up the other.

Expiration tends to cool the body, by thé formation of watery vapour, and this is not compensated for, as the loss of heat by the formation of carbonic acid was, by the absorption of oxygen. This watery secretion is most abundant when the body is exposed to heat, and is evi-

dently the cause of equalizing the temperature of animals. A girl in France went into an oven heated to two hundred and eighty degrees (Farhenheit). Blagden went into a room in which the temperature was two hundred and twelve. He felt it to be very disagreeable at first but he was quickly relieved by perspiration. The heat was raised to two hundred and twenty degrees, and even to two hundred and sixty; but though he bore this temperature of the air, he could not bear his finger in water, although that remained at the boiling point, only two hundred and twelve degrees. It is now said the human frame can support a heat of even three hundred and fifteen degrees; and Monsieur Chabert says he could bear four hundred. Some fishes are said to be found in hot springs, at a hundred and eighty degrees; and others were thrown out alive from a volcano, the water of which raised the thermometer to two hundred and ten degrees. Some plants likewise are found to possess a power of this kind, being found in boiling springs. In all these cases the increase of halitus from the skin and lungs is a preservative. This is proved by the loss of weight in their bodies, and by the weight gained by the air in which they were inclosed. Mice inclosed in air loaded with vapour, died with a small increase of temperature.

In the fœtuses of the *mammalia* the lungs have no power of dilatation and compression; for it is not necessary there should be any power of suction in their lungs, because the purifying fluid (the blood of the mother) is propelled to them. There is something analagous to this in the action of the winds on some plants, and in the currents of water produced by some animals, in which, perhaps, respiration is a passive function. The *maternal* blood stands to the fœtus in the relation of the *inspired* air, and the *fœtal* blood stands in the relation of the *expired* air; so that perhaps the latter must acquire carbonic acid, though probably in so small a quantity as never to have been detected; for it is only a small part of the fœtal blood which goes to the placenta, and that is only imperfectly oxygenized. If you calculate you will find that half a grain of carbonic acid will have to be mixed with thirty pounds of blood circulating in the system. We must conceive that there is likewise an extrication of heat in the fœtal circulation,

The placenta was thought by the old authors to be more analagous to a mamma than to the lungs. It is said by Arantius, Harvey, and Munro that we cannot inject the vessels of the fœtus through those of the mother. Dr. Williams's theory is probably the true one—that the blood of the fœtus is purified only by its *contiguity* with that of the mother. Any arterial blood of the mother will do as well as that of the uterine arteries, as is shewn in extra-uterine pregnancies. Pressing the umbilical cord does not *mechanically* impede the circulation of the blood, for that still goes on through the *aorta* and *vena cava;* but it prevents the *purification* of the blood, and that quickly puts an end to the *circulation.* There is no difference in the colour of the blood in the fœtus, or in reptiles.

The skin is a second respiratory organ; the secretion of carbonic acid going on there, and the same changes in the blood as take place in the lungs. There seems an analogy here to the skin of some zoophytes, to the air-bag of fishes, to the bags which, in some animals, appear to perform the office of lungs, stomach, and uterus; to the rudimental lungs of serpents, to the air-cells of birds; and to the long processes of the *cetacea.* In fact every part to which the oxygenating medium gains access may perform the office of lungs. The only difference in this respect between the skin and the lungs is, that in the former the oxygen is absorbed by *arterial* blood instead of *venous;* and that the carbonic acid is secreted by *venous* blood instead of *arterial.* It is probable that respiration goes on in all the mucous tissues. Some animals are found by Chaussier to be easily suffocated by immersing their *bodies* in gases which do not contain oxygen, although their *lungs* are still allowed to respire oxygen. Carbonic acid is also found to be produced by the skin after all the oxygen has been withdrawn; so that here there must really be a *secretion* of the carbonic acid, and it is probably so elsewhere. Some have thought that the gas produced by the skin was nitrogen; but it has been proved there is carbonic acid as well as nitrogen. The latter is secreted by the intestines, as well as by the air-bladder of fishes.

Flow of Arterial Blood.

In the more perfect plants the juices which are absorbed require some altera-

tion to adapt them to the purposes of nutrition. Hence they must be provided with two sets of vessels, the first being analogous to veins, lymphatics, &c., and the others to arteries; and we should conclude from this analogy, that the former would be found to present various differences, while the latter would be simple. This is found to be actually the case. The latter (those which are analogous to arteries) are returning vessels. They are entire, and are situated in the inside of the bark, where secretion goes on. But the former, the ascending vessels (those which are analogous to veins and lymphatics,) are situated about the pith, and are spiral, reticulated, annular(beaded, &c. These vessels may likewise be viewed in the light of an intestinal tube.

Plants have an ascent and a descent of the sap, but not a proper *circulation;* for their two sets of vessels do not communicate with each other at bottom. Some of these vessels have been thought to be designed for conveying air, as the arteries in man were at one time considered to be. But that opinion was wrong, sap having been found in them. The spiral vessels have a tendency to become punctuated, but the entire vessels are always the same. The vessels of plants differ from those of animals, in being of uniform size, and in not anastamosing. In fact, they are wholly capillary, the one set absorbing and the other secreting, in every part of their course.

In animals the matter which is circulating has mostly circulated before, but the matter which is moving in plants is always new. Assuming that animals absorb as much in proportion to their bulk as plants, the motion of fluids in the latter must be very slow. In almost all the zoophytes, the structure of the whole body is uniform, so that there is no necessity for circulation, all parts of the animal equally secreting and being nourished. In some of the zoophytes we find vessels which branch off from the stomach to a circular tube which surrounds the animal, but there are no vessels to bring the fluid back again, so that there is no *circulation.* The vessels which first appear in the animal scale, take rather the appearance of intestines, and are called *cæca.* The second form is a dorsal vessel which gives off no ramifications, but receives air-vessels from the surface of the body. In several of the *invertebrata* there is a kind of central organ (sometimes muscular) which sends out vessels, and which pulsates though removed from the body; some have both arteries and veins without this organ. The *medusa aurita* has a vessel which surrounds the body, and from which other vessels pass to the stomach. The dorsal vessel is best seen in insects. The spider presents a good example; in this arrangement the air is brought to the blood, instead of the blood to the air, and this makes the body lighter, and, therefore better adapted for flying. These spiracles, or tracheæ are well seen in the bee, the silk-worm, and the sphinx. Carus has lately found a circulation of globules of blood in the *larvæ* of insects, although it is generally said that insects have *no* circulation.

The third form (that in which there are arteries and veins) is well seen in the *lumbricus terrestris,* or common earth-worm; it has three vessels, of which, probably, one is an artery, and two are veins; and one of the latter again, perhaps, fulfils the office of a pulmonary vein, bringing back the blood after it has been exposed to the air of the spiracles: but the circulation may go on independently of this vessel, through the other two, so that it resembles, in this respect, the circulation in reptiles. There is the same arrangement of vessels in the leech, although the connection of arteries and veins is not so evident.

The fourth kind (that in which a heart is found among the *invertebrata* is seen in the ship-worm, the fresh-water muscle, the snail, and the cray-fish. In the second of these (the fresh-water muscle) the rectum passes through the heart, like a tendon through a bursa. In the *sæpia* there are three hearts—two pulmonary and one systematic. The pulmonary hearts are mere dilatations of the *venæ cavæ;* but as they pulsate, they are called *heart.* In the sea-slug, the heart is placed behind the gills, and in the cray-fish and soldier's crab the heart lies immediately under the dorsal shield.

In reptiles and fishes the heart is single, while in birds and the *mammalia* it is double; in the *osseous* fishes it is placed between the gills, but in the *cartilaginous* fishes it is situated at a greater distance from them, and is inclosed in a pericardium. The proportion which the size of the heart in fishes bears to that of the whole body is as that of one to three hundred and sixty, or from that to seven hundred and fifty, while in man the proportion is as one to one hundred

and sixty. In fishes the heart is pulmonary, for it sends the blood to the gills, whence two pulmonary veins lead to one aorta, which runs down the belly, and sends two *cavæ* laterally to the heart. Thus the circulation in fishes is *not* independent of the respiration. Carus objects to calling the heart *pulmonary*, because it supplies the aorta, though *indirectly*; but if there be any meaning at all in the term *pulmonary*, that term is applicable here; in cartilaginous fishes the valves at the heart are very complicated; there are several rows of them. In reptiles of the frog tribe the heart is situated below the sternum, and within a pericardium; the proportion which the heart of a frog bears to its whole body is as one to two hundred and sixty.

REVIEW.

Facts and Cases in Obstetric Medicine, with Observations on some of the most important Diseases incidental to Females.

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We are often surprised at the phrase "Diseases of Females," employed by the majority of obstetric authors in this country, as if they intended to describe the maladies of the female creation. They exclude the word women from their title pages for some unintelligible reason, and do not adopt the correctness of other European and most American writers. We are led to make these remarks, because we regret to notice the constant use of inaccurate terms by some of our best authors and most judicious obstetricians. It is not easy to comprehend why our contemporaries do not use accurate terms. Mr. Ingleby is guilty of another act of commission, his use of the word accoucheur in place of our favourite and original term obstetrician. But these are peccadilloes easily excused when contrasted with the valuable practical remarks in the work before us. Mr. Ingleby is most favourably known to the medical profession at home and abroad, by his valuable treatise on Uterine Hæmorrhage, which we were the first to laud in the terms it so well deserved.

The present production is a very excellent practical treatise, so far as it extends, and abounds with judicious advice, based upon careful observation. It is comprised in seven sections, the first three of which, with a portion of the sixth and seventh are already in print, but now appear in an enlarged and improved form. The following are the contents of the volume:

1. On Puerperal Convulsions; 2. On Malposition of the Uterus, Ovaria, Bladder, and Urethra, both in the impregnated and unimpregnated state, in connexion with retention of Urine; 3. On Obstruction in the soft parts to the progress of labour; 4. On the induction of Premature Labour in cases of organic disease. 5. On Laceration of the Uterus and Vagina; 6. On the Inversion of the Uterus, *viz.*, on the Signs and Symptoms of Pregnancy, their obscure and deceptive characters, their complication with disease, and the signs which denote the extinction of life in the fœtus, Appendix to 6.

These are topics of great interest to every practical obstetrician, and are very ably discussed by our author. He is evidently well acquainted with obstetric literature, and has carefully studied it, as his judicious treatment of very different diseases most fully attests. This position will be amply proved by the extracts, which we now proceed to place before our readers.

The first section is a complete account of convulsions during pregnancy, parturition, and the puerperal state, and contains the opinions of the most celebrated obstetric writers, illustrated by numerous cases observed by our author. This disease deserves the most attentive consideration on account of the frequency and dangerous character, and of the diversity of opinion as to its pathology and treatment. Mr. Ingleby thus describes it:—

"Convulsions and uterine hæmorrhage are justly considered far more dangerous in their consequences than any other affections which attend upon pregnancy or parturition, and, as respects the practitioner, are inseparable from the heaviest responsibility. There is, however, a very striking difference between hæmorrhage and convulsions, alluded to by Dr. Joseph Clarke, in his admirable observations on the subject, viz. the rare occurrence of hæmorrhage in a case of first labour, whilst convulsions, though occurring under all circumstances of

pregnancy, arise far more frequently in a first than in any subsequent gestation.* For the best account extant, of convulsions, we are indebted to Mr. Denman; and the unsettled state of practice which he there complains of, remains very much the same at the present day. He observes, that "the rules given by different writers for the management of labours attended with convulsions, seem to have been founded on less certain principles, and to have been less confirmed by experience, than those which have been given for almost any other cases that can occur;' and again, 'there is yet room for improvement in our knowledge of the causes, effects, and treatment of convulsions, depending on pregnancy and parturition." Dr. Dewees describes three forms of convulsion, viz. the hysterical, the epileptic, and the apoplectic. Velpeau describes a fourth, or the tenanic. Baudelocque describes the cataleptic also; and to these another might be added, and termed the anæmic, embracing that distinct class of convulsions which depend upon large effusions of blood. It is more common however, to consider the disease as arising from irritability on the one hand, and plethora on the other; and, provided we acquire accurate ideas of the state of the brain, we shall not be misled by names.

Puerperal couvulsions, properly so called, differ most essentially from convulsions which occur from hysteria, and will be found sufficiently distinct from this affection, for all purposes of practice. Hysterical spasms, or partial convulsions, to which nervous and highly excitable women are very liable, (usually during the term of pregnancy, but rarely during labour,)* are accompanied with a spasmodic state of the trunk and extremities, globus, palpitation, distention of stomach and flatulent eructations, and other symptoms of hysteria: but neither with sternor, nor coma, and rarely, if ever, by convulsion of the muscles of the face. The pulse, though small and frequent during the paroxysm, regains its natural state on the fit disappearing. The hysterical species, in its mode of attack, duration, degree, violence, and the perfect recovery of the patient on the subsidence of the fit, is so very different from eclampsia, that a man must want common sagacity to confound the one with the other. As for the apoplectic species, without sagacious effusion, it is really a distinction without a material difference; it differs only in degree, and usually appears during labour. Indeed it may be doubted whether there are any decidedly pathognomic symptoms by which this form of apoplexy can with certainty be distinguished from the strictly epileptic seizure. Not only may simple apoplexy arise from mere fulness of the blood-vessels, but many of the symptoms which caracterise epilepsy, including the wounding of the tongue, may be produced by an effusion of blood. I have, moreover, recorded a fatal case of convulsions, attended with sanguineous effusion, aud yet the symptoms were less formidable than in a similar case accompanied merely by a very slight effusion of serum. The term "puerperal convulsions" should be confined to cases occurring in paroxysms affecting the contractile tissues generally, and, in many respects, resembling epilepsy, although the attack cannot be regarded either as apoplectic, epileptic, or tetanic, but partaking more or less of the characters of each of these diseases. The circumstance of blood-letting proving so efficacious in puerperal convulsions, militates strongly against its genuine epileptic character, for bleeding in common epilepsy is usually injurious; neither is the subject of puerperal convulsions left exposed to attacks of chronic epilepsy. Dr. Hamilton prefers retaining the old term eclampsia, the word still used by the French, as expressive of this affection, rather than substituting the term epilepsia, for the following reasons:—

First.—The premonitory symptoms (during pregnancy) being well marked.

Second.—The first invasion of convulsion being soon followed (in many instances at least) by other paroxysms.

Third.—The immediate return of sensibility (in some cases) on the paroxysm

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* In Clarke's 19 cases, 15 occurred in the first pregnancy. In 48 cases recorded by Dr. Merriman, 36 were first cases. Of 30 recorded by Dr. Collins, 29 were first children, and twenty of these were males: 15 of the 30 patients were delivered by the natural efforts, and all recovered—5 cases terminated fatally. A large proportion of the cases contained in the present essay, arose in the first gestation.

* Hamilton says, that regular hysterics seldom happen during a late period of pregnancy, and never during labour; a statement to which an exception may be made.—See Practical Remarks on Convulsions, in 5th volume of the Annals of Medicine, p. 313.

ceasing.—(This remark must apply to the circumstances of the first or second fit. A repetition of genuine puerperal convulsions will not fail to produce the same tardiness in recovery, as is noticed in epilepsy.)

Fourth.—In a few instances, by the increased sensibility of the external senses.

Fifth.—The absence of the aura epileptica.

Sixth.—The pulse being more or less affected during the remission of the fits.—(A very severe case occurred to my observation, in which the pulse was not perceptibly affected.)

By Sauvages, puerperal convulsions are included under the genus eclampsia; but there is one symptom which does not belong to eclampsia, viz. the foaming at the mouth. Common epilepsy, in its nature, is purely chronic. Puerperal convulsions, or acute epilepsy, according to Vogel, is a chronic disease, far more violent and dangerous than common epilepsy, and the only form of convulsions peculiar to the puerperal state. But, independently of other objections, the term epilepsy, by conveying an idea unfavourable to depletion, is inappropriate. Convulsions cannot be regarded as an idiopathic disease, but as an effect of some lesion, either of function or structure, capable of exciting the strongest involuntary movements in the contractile tissues generally.

Respecting the comparative frequency of puerperal convulsions, as well as its comparative fatality, authors are vague and contradictory; but, according to Collins, 1 in 547. The disease occurs with sufficient frequency to claim our closest attention; and its great fatality has been very generally admitted."

It is most essential to bear in mind the different species of convulsions, as they require a modified treatment. We fully agree with the nosology, advanced by Mr. Ingleby; and its value will be apparent when we come to notice the treatment. But let us first consider the causes and pathology of the disease under consideration.

" *Causes.*—The remote causes of puerperal convulsions are essentially connect-with the uterus, and a morbid susceptibility of the nervous system. That pregnancy and parturition are the predisposing causes, may be fairly assumed, since genuine eclampsia arises in those states of the system only. Dr. Bland held a contrary opinion; yet some women are so prone to convulsions, as to experience the attack in every successive labour: very slight pains throwing the whole muscular system into contraction. The actual paroxysm is usually preceded by sanguineous congestion; the increased supply of blood required by pregnancy being carried beyond the demands of the uterine system is determined to another organ, usually the brain. The attack may possibly arise independently of any previous fault in the circulation, especially in persons of hereditary predisposition, spare habit, irritable temperament, high mental refinement, and in whom the excitability of the nervous, and, subsequently, the sanguiferous system, is called forth by causes apparently trivial. The position assumed by Hunter, Denman, and others, that convulsions frequently arise in weak and irritable subjects, accords with experience, since persons of spare habit are prone to excitement. In such constitutions, the strong susceptibility of the nervous system, when not congenital* or manifested during dentition, is subsequently acquired by the force of education, or irregular habits; and displayed, both morally and physically, from an early age to the middle period of life. During a first pregnancy these tendencies are increased tenfold: the brain, in particular, from participating in the uterine excitement, is unequal to the supply of unimpaired nervous energy. If we advert, for a moment, to the changes which result on the descent of the ovum in utero, the number, progressive size, and activity of the uterine vessels, and the excited state of the lining membrane in the secretion of lymph, we cannot feel surprised that sympathies naturally so powerful should, in the early weeks of pregnancy, quicken the circulation of the brain, and other-

* Greatly as the subject of the utero-placental circulation may admit of controversy, it cannot be doubted that whatever acts injuriously on the mother's system—for instance, anger or other mental emotions—may exert an influence over the nervous system of the fœtus. The convulsions of early infancy cannot altogether be disconnected from these causes. In a case of convulsions, related by Spence, which proved fatal, there was not any dilatation of the os uteri; the Cæsarian section was immediately resorted to, and a living infant extracted, but convulsions terminated its existence within an hour.

wise strongly influence its functions. Even at the menstrual period, especially in dysmenorhœa, the excitement in very irritable females amounts to absolute convulsion. It follows, then, that in similar constitutions, especially when moral impressions are superadded, the brain and nerves will be exceedingly susceptible during the whole period of gestation, as well as in the puerperal state. Thus a young woman, who had been recently delivered, on receiving the intelligence of the death of a friend under afflictive circumstances, became convulsed, delirious, and died with marks of serous effusion. It may be asked what is the exciting cause—or how does pregnancy act in the production of the fit? The precise manner in which the nervous influence becomes sufficiently disturbed to produce convulsions, does not always admit of demonstration; and no single cause can be assigned as applicable to all cases. It is equally difficult to explain the production of tetanus from a wound; convulsions from dentition or worms in the intestines; paralysis of the optic and auditory nerves, whilst the vessels of the brain appear perfectly natural. The immediate cause appears to be an irritable condition of the uterus, sympathetically reacting upon the muscular system through the nerves of organic life.

"The voluntary muscles derive their nerves mainly from the spinal marrow; still, from the close sympathy subsisting between the uterus and the cerebro-spinal system, through the medium of the nervous ganglia of the great sympathetic, irritation may be directly excited adequate to produce the most alarming forms of convulsion.* Possibly the researches of Bellingeri, Bell, and others, may ultimately lead to explanations relative to deranged nervous actions, which are at present involved in mystery. My own observation, that the seizure occurs in robust and plethoric habits, is confirmed by Dewees, Ramsbotham, Collins and Valpeau: by the latter it is stated, also, that convulsions attack women who menstruate frequently and freely, and nervous women—"*maux des nerf.*" It has been affirmed that the fits arise most frequently during the night; a circumstance favouring the opinion of its being a disease connected with congestion of the brain and spinal marrow. Dr. Blundell attributes the convulsions, in most cases, to increased action of the cerebral vessels; an opinion borne out by Merriman, who found the blood not only inflamed, but cupped also; a circumstance, I believe, not unusual at the close of pregnancy. In addition to these coincident circumstances, the bulk of the uterus, in advanced gestation, is calculated to promote engorgement of the cerebral veins, impeding the return of blood to the heart; whilst, under an increased power of the heart and arteries, serous effusion will be directly promoted. Hence the advantage of taking blood from the jugular vein, in preference to the temporal artery, and *vice versa*, according to the state of the circulation. It has been said that the pressure of the gravid uterus is uniform: a statement far from correct. in some pregnancies the uterus distends much more at its posterior and lateral parts, than it does at its anterior; so that a woman shall appear much smaller in one gestation than in another, although the volume of the uterus, and its contents may be equally great. The pressure, when exerted over the intestinal canal, by oppressing the circulation, tends most materially to produce eclampsia. In several instances, I am certain that scybala were retained in the bowels for many weeks before delivery, notwithstanding a daily evacuation. Thus hæmorrhoids, tumefaction of the labia, œdema of the lower extremities, and a varicose state of their veins, prevail, according to the sear and degree of pressure: œdema of the hands and face, and epistaxis, arise most probably from increased circulation. To this view of the subject (which in practice has been acted upon to an injudicious extent) may be traced the opinion, that delivery is indispensable to the patient's safety; but whatever may be the predominant feature of the paroxysm, immediate attention should be directed to the state of the circulation. Whatever suddenly affects the momentum or velocity of the blood, either by diminishing or increasing the frequency or force of its circulation, cannot fail to influence, very materially, the functions of the brain, and when the balance of the circulation is lost and the supply of nervous power both to the voluntary and involuntary muscles is interrupted, the train of symp-

* I presume that Hunter refers to this state of the system, when he speaks of the attack "killing like an electric shock."—MS. Lectures.—In the convulsions of infants when teething, life is destroyed in the same manner.

toms which characterises a fit of convulsion then ensues. It is now well understood, that the brain cannot long be deprived of the natural impulse in its arteries with impunity. Andral, in particular, has shewn that states of anæmia, as well as of hyperæmia, are equally productive of convulsions ; and although it is maintained by some, that the amount of fluids within the cranium can undergo but little change, the position of Andral is confirmed by daily experience. Allowing, therefore, for complications and variations of constitutions, the more important convulsions of the puerperal state may be referred to two principal and opposite conditions of the system ; either an excited or turgid state of the vessels of the brain (often by improper diet, and a neglected state of the bowels during gestation) ; or by loss of blood, as after a dangerous hæmorrhage. There is also a third state, subordinate to those just mentioned, and which seems more immediately dependent upon excessive sensibility of the uterine fibres, since it generally happens under an irregular and highly painful action of the uterus during its dilatation. Not only does the attack usually occur in first pregnancies, but, what is remarkable, with very few exceptions, almost always when the presentation is natural. " Where the presentation is preternatural, there is little cause (says Collins) to dread the attack." Denman makes a similar observation. But admitting the seizure to depend chiefly upon mere morbid sensibility, the circulation will generally be found more or less faulty, as the straining made in an advanced state of labour will occasion an increased force and velocity of the circulation, and bleeding may be a most judicious precautionary measure. Besides these causes, convulsions which arise after the os uteri has acquired a moderate degree of dilatation, may sometimes be traced to malformation either of the pelvis or head of the infant.

"According to Denman, abdominal inflammation is a common sequence of convulsions after delivery. Gooch and Collins, also, speak of peritonitis following convulsions ; and in an instance of convulsions occurring before delivery, and detailed in another part of this work, extreme tenderness of the abdomen was a very prominent symptom, and continued until the patient had been bled a number of times. M. Duges observes, that serous plethora, or the anasarca which often accompanies a first pregnancy, especially if the œdema extends to the face and upper extremities, predisposes to eclampsia : and Velpeau is of the same opinion. I. F. Osander also considers a tumid condition of the hands and face as premonitory of the attack ; but Miguel questions this doctrine. That convulsions have frequently occurred in connection with œdematous states of the system, accords with experience. But is it not more agreeable to the principles of medical science to consider both complaints as the effect of a common cause, viz. an embarrassed circulation, rather than to regard the one as the consequence of the other ? It has been affirmed that this disease reigns epidemically, connected, probably, (as Andral observes) with electrical states of the atmosphere, acting primarily on the nervous system and producing cerebral excitement. The particular influence of the air is alluded to by those accurate writers, Drs. Smellie and Denman. Madam Lachapelle remarks, " when one of our women is taken with convulsions, we rarely fail to have, soon afterwards, others in the same sate ;" a fact also stated by Ramsbotham, who says, " I have repeatedly remarked, among the numerous patients of the Royal Maternity Charity, as well as among others to which I have been accidentally called, that several cases have occurred soon after each other." This condition of the atmosphere has been referred to by other eminent writers. A variety of other causes, of a subordinate kind, are mentioned by authors."

There are many points in the preceding etiology which may be disputed, as it is frequently matter of great difficulty to determine at the bed-side, whether convulsions depend on cerebral congestion or irritation. This will be more evident when we peruse the pathology of the disease, which we shall insert in a subsequent article.

A SUCCINCT TREATISE

ON

MEDICAL REFORM FOR IRELAND.

(Continued from page 564.)

Truly has it been said, "It is the state, the luxury, and fashions of the wealthy that give life to the artificers of elegance and taste; it is their numerous train that sends the rapid shuttle through the loom ; and when they leave their country, they

not only beggar their dependants, but the tribes that live by clothing them." The habitation of the miserable weaver becomes a spectacle of filth and confusion; his hearth cheerless, his only visitor the cold and wet which made its way through the ill-saved roof, his helpless infants famishing around him, and thus learning to regard all the energies of his manhood as useless, and his loom but lumber; he often sinks down in mental agony, and bodily exhaustion. In such a plight, it may easily be imagined, recourse is had to any and every means; every vice is resorted to which can either intoxicate affliction, or destroy sensibility. Thus it was that disease procured another agent, no less terrible than that from which it sprung. It was no unfrequent spectacle to see his whole family, a wretched group, coming down to the hospital gate, or carried thither in a vehicle for that purpose, severely sick indeed, but bearing the symptoms of no other malady but that of cold and hunger; nor was their condition less necessary to be attended to, than if they had laboured under a more regular form of disease.

Upon subjects not strictly medical, I speak neither willingly, nor perhaps scientifically. Philosophers declare, that absentees do no injury to a country; and those who are absentees, may pride themselves for their philosophy. But when speaking of those causes to which the fearful increase of distress in this city, for the last eighteen years, is to be referred; I feel it my duty to risk my character as a scholar, while I state my experience, and declare, that from close observation of the course of things in this country, it is my firm conviction, that the miserable state of our *retail* trade is the immediate cause, and that *it* has been the effect of the absenteeism, and the introduction heretofore of machines, *without capital,* which turned their powers against manual labour at home, without in the smallest degree, re-animating an expiring commerce. This conviction is here stated, because it is the result of experience; that it will scarcely meet with approbation, is easy to foretel; but certain it is, that absenteeism and machines, the loss of trade and poverty, vice and disease, have worked in a frightful accordance.—*Vide* MY ANNUAL REPORT FOR 1828.

Throughout the country the effects have been as deplorable. The agriculture is dwindling in the hands of persons whom necessity obliges to over-work their farms—the ground is divided and sub-divided—where a comfortable cottage once stood now appears a mouldering hut, or more frequently, a filthy hovel, scarcely fit to accommodate the swine that are domesticated within it. Surely, if the landlords of Ireland were to be found upon their estates, it is impossible to suppose, that their lands would have been parcelled out as they are at present; or that their tenantry would be so abused, or that those vast tracts of country which might be made such sources of wealth to their possessors, and would afford permanent employment, and support, and independence to their cultivators, would be now lying bleak and barren; never crossed but by an adventurous sportsman, or the wretched speculator in an illicit still.

I should be misunderstood, however, were it supposed that I meant to attribute to absenteeism alone, the enormous evils that exist. Other causes which I am about to mention, have, no doubt, lent their destroying aid; but it has hatched the evil, and given sufferance to a spirit of insubordination, which I am certain, no system of Poor-laws could satisfy, and which, I greatly fear, no system of Police will be found able to subdue; an opinion not vaguely expressed, but founded on the well-known fact, that men are never either happy or grateful when living on the bounty of others, however munificent; and this general principle I believe to admit of few exceptions, and to be so peculiarly strong in the native Irish, that to such as have not been already forced on the highway to beg or rob, it would be more tolerable to endure starvation than to be fed on alms.

Having mentioned absenteeism as one great cause of the misery which at present prevails in Ireland, the next deserving notice is the evil of religious discord which has been plaguing this country for centuries, and been irritated, of late years, to madness. The consequence directly resulting from this evil are well known; but there are certain lesser effects of it which escape mention in general discussions, that may be interesting in the present discussion. One of these to which I formerly alluded, namely, the introduction of strangers into the various stations of lucrative employment has since ceased with the stations themselves. In the higher offices of society this, I believe, was frequently thought necessary, that the government which appointed to

them might not seem to take part with a faction. But among the lower ranks, the rage of party feeling has been most disastrous, especially amongst members of rival creeds, and it often happened that the business of the workshop was postponed to the discussion of some desperate scheme, or the arrangement of some murderous combination, and the employers were as often forced to prefer any workmen to the natives. It must also be admitted, that (besides their not being accustomed, like others, to machinery,) the fierce tempers, frequent irregularities, and midnight assemblies, which alternate idleness and agitation produced among the Irish workmen, must have seriously impaired the efficiency of their labour. The consequence was, as I have stated, and I have no doubt that if a census had been taken of the working artizans in Ireland, it would appear in 1820 to 1830 inclusive, that the natives bear a very unequal proportion to the whole; and when this is the fact, it is little less than superlative effrontery in the writers and talkers of other nations, to swell with rage at the thought of the Irish poor partaking of their local advantages, and to follow them with curses and abuse. I would deem even this notice of such persons, perhaps more than they deserve, but that I am persuaded many of them are ill informed of the relative conditions of the working classes in each of the Sister Kingdoms.

The evils which I have just stated were certainly great, but, I long hoped, not incurable; for, as history and common sense shew us that great changes cannot be instantaneous, yet since political distinctions have been happily removed by a measure both wise and just, its benefit must follow; but time must have given its softening shadows before the spirit of animosity can entirely disappear. Upon this subject it would be easier to fill a volume than a page; I shall, however, only add, that in my humble judgment, to promote this object, or attempt to remedy the existing evils of party hatred, by any system of Poor-laws or other precipitate means, would be found equally absurd in theory, and impossible in fact.

The other source of Irish wretchedness not to be compared in magnitude with, perhaps, either of those which I have already named, is yet so great and so intimately connected, that it requires to be noticed along with them—this is the use of machinery, *without capital or commerce*—wherever a machine can be used in such species of employment as Ireland affords.

Upon this subject I conceive that the most injurious error generally prevails. People point to England, and ask whether her machinery did not, in a great measure, produce, and does not altogether sustain her present greatness, and then sneer triumphantly at any objections to the use of the same power in this country; but the cases are altogether different—the foreign relations more than greater natural advantages of England, give to her a command over commerce, which nothing but her machinery could have enabled her to secure; it is manifest too, that the same mechanical force will continue necessary, while England maintains her commercial supremacy—or in other words, so long as the demand in the foreign market keeps pace with the power of her machinery; and late occurrences have fully proved that if ever the day comes, (and God grant that it be far off,) when such demand shall cease, or seriously diminish, the countenance of such mechanical operation would be ruinous to the operatives of England. Now, the circumstances in which I have supposed that England might have been placed, are precisely those in which Ireland has been long placed; for though the foreign market is open to her, this is no advantage, since she has no capital wherewith to compete in it; her efforts with a few trifling exceptions, are of her raw produce, and these chiefly for the English and Scotch markets; it is right, also, to observe, that these exports afford the strongest proof of Irish misery, for the English artizan and the Scotch artizan can afford to send over to our home market, and purchase from the famishing and pennyless Irish the very articles which are necessary for home consumption.

At the commencement of my evidence given to the Poor-law Commission, and of my sketch of the Medical and Statistical History of Epidemic diseases in Ireland, I stated from Dr. Whitelaw's Census in 1798, the depopulation of the liberties of the city of Dublin during the succeeding six years; and from my annual Reports of the Fever Hospital and House of Recovery, the unprecedented growth of Epidemic Fever and Pestilential disease, since that time, as urgent arguments for investigation of the causes of these calamities; and in the succeeding parts of the same documents, I contributed to the success of that investigation.

First, by showing that the means previously devised, had failed, under the prejudice of pre-conceived opinions of pestilence, being mainly or wholly dependent on contagion; as well as that it would be dangerous for inmates of Fever Hospitals, although such institutions were expressly provided to check the growth of epidemic and pestilential diseases, to admit those labouring under the forms that mostly prevailed from 1831 to 1835 inclusive.

The importance of that investigation and the fallacy of such Hypothesis, having since become manifest, it would be needless, perhaps on the present occasion, to do more than refer to my former statements. And the general confirmation of them, since afforded by those who have written from actual observation on the same subject, as will appear by comparative references. My Medical and Statistical Sketch, already adverted to, states (page 9) that "the early and terrific effects of the destitution referred to in the introduction, appear in the synoptical tables of the Rev. James Whitelaw's essay on the population of Dublin. In 1798 (he states) there were in Dublin:—16,401 houses, and 172,091 inhabitants; and in 1804, but 14,645 houses, and but 167,899 inhabitants; so that the return of 91 exceeded that of 1804, by 756 houses, and 4,192 inhabitants.

Now if it is borne in mind that it was in 1798, Dr. Jenner published his 'Enquiry into the Causes and Effects of the Variolæ Vaccinæ,' and that his recommendation of infection with that virus has been since very generally adopted in Ireland, and its beneficial effects as widely extended, it follows necessarily from this singular depopulation of Dublin since, notwithstanding the most fatal of epidemics had been arrested, that other epidemics must have become general and malignant."

The description of the progressive increase of febrile and pestilential disease in Dublin, I am about to offer, is taken for the most part from the annals of the Fever Hospital and House of Recovery Cork-street, since it opened for the reception of patients in 1803. By the number of patients admitted into that institution each year till 1817, when other fever hospitals were established, the rise or decline of disease may, in some degree, be calculated; and by the average mortality, then the only medical statistics in the Irish metropolis, its mildness or malignity may likewise in the same degree be measured.

The number admitted the first year was 415; of these 29 died, the average mortality being 1 in 14 $^{9\text{-}72}$. In 1805, the hospital district, during the last eight months of it, including all the city on the south side of the Circular-road, the admissions were 1024, and the deaths 67, average mortality 1 in 15 $^{19\text{-}76}$. Evidence of the agency of miasm arising from the bodies of the sick, and of malaraia from adjacent marshes, was stated in the Medical Report of that year, founded, in the one case, on the communication of fever through families, and in the other, on the frequency of diurnal paroxysms and septennary crises. (See reports for the years 1804, 1805.) In 1806 the admissions from the south side of the Circular-road were 1264, and the deaths 103, average mortality 1 in 12 $^{28\text{-}103}$.

In 1807, though female servants and cases of scarlatina, which were not previously admissible, were then received, yet a diminution of fever appears to have been effected in the district; but owing to a more malignant character of the epidemic at that time, the average mortality increased. The numbers admitted were 1100, deaths 92, average mortality 1 in 11 $^{88\text{-}92}$. From the medical report of that year, it appears that scarlatina prevailed very generally amongst those who did not enjoy the immunity given by a previous attack, and that *Cynanche Tonsillaris* very generally, and *Cynanche Maligna* frequently was noticed amongst others who did. The apothecary and assistant were severely attacked, and it was then, for the first time, proposed to the managing committee by the physicians, to have separate carriages and separate wards for the malignant cases. It however should be stated, that no farther bad consequences arose from free admission of all forms of the epidemics into the wards. (See Medical Report for the year 1807.*)

In 1808 the efficacy of the fever hospital became still more manifest, and both encouraged and enabled the physicians to recommend its extension over the whole city, within the Circular-road. The number of those admitted this year under that arrangement was 1071, and the number who died 94, average mor-

* See the Medical Report of the Cork-street Fever Hospital for the year 1107. By Wm. Stoker, M.D.

tality 1 in 11 [37-94].* In 1809, a further decline of fever enabled the managing committee to admit applicants of every grade of society in Dublin labouring under fever. It was also very remarkable, that as continued fever declined that year, ague as much more prevailed, particularly in the spring months. The total number admitted in 1809, (of whom a large proportion laboured under intermittents,) were 1051, and 83 died, average mortality 1 in 12 [65-83].†

In 1810 the condition of the working classes being further deteriorated, partly by the cheapness of ardent spirits, but chiefly by ruin of the middle classes, from want of trade, (see Medical Report for that year), a remarkable revolution in the external character and nature of epidemies took place. Fevers became more typhoid or pestilential than had before observed. The prominent symptoms were those of debility, marked by feebleness of the pulse and coldness of skin, such as had not been previously observed, and these were accompanied by corresponding alterations in the external characters of the blood, which, instead of being firmly coagulated and sizy on the surface, as happened before, at least, at the commencement of the disease, was seldom so at any stage of it. This was stated in my report of that year, and also that crises and septenary movements still continued. It appears also in the report of that year, that even then the aggravation of symptoms led to the question of late years so vital, whether or not a new disease *sui generis*, had been generated here or imported from abroad? The number admitted greatly exceeded that from the same district in the preceding year, *viz.* admitted 1774, died 154, average mortality 1 in 11 [40-77].‡

In 1811 there was another decline of disease, seemingly to be connected with a corresponding improvement in the condition of the working classes and in trade, and partly, perhaps, with a check to disease given by the Cork-street hospital. The numbers admitted, from the whole city were 1472, less by 302 than the preceding year. The deaths amounted to 115, or 1 in 12 [91-115], a smaller average mortality than the preceding year.

In 1812, the malignant type of the distempers which first appeared in 1810, again evidently, under a repetition of similar causes, recommenced; and, notwithstanding the reduction of the numbers admitted in the preceding year, increased to 2265, additional accommodation being provided at the Cork-street hospital to meet the pressure. There was not, however, an increased average of mortality, the deaths being 116, or 1 in 13 [107-166] admissions.

In 1813 the numbers affected by distempers of nearly the same type as that of 1810, further increased; but whether owing to a more appropriate treatment in mixed cases and in distinct forms of typhoid and inflammatory disease, successfully adopted, chiefly according to the indications afforded by morbid actions, and co-existing alterations in the external characters of the blood, already intimated when treating on the pestilence of 1810, or to earlier application for admission, or to both these causes combined, the mortality in the Cork-street hospital was in 1813 less than in the preceding year. The number admitted was 2627, deaths 164, average mortality 1 in 16 [3-164].

In 1815 those diurnal movements, which previously gave to idiopathic fevers more or less of a remittent or intermittent form, became less distinguishable, and the distinctness of continued fever into symptomatic and idiopathic, and into inflammatory and typhoid disease, became still more manifest, so that appropriate treatment for each could be better prescribed. On this account it was, I believe, chiefly, that notwithstanding the numbers admitted greatly exceeded those of any preceding years, yet the mortality in the hospital was greatly diminished. There were other circumstances, however, that year, which I am sure assisted these favourable results, such as opening a new building with much larger wards than those in the old, (see my report for that year,) and thus increase the number of beds from 80 to 180. Besides there was earlier application and increased confidence in the means employed. The number of patients admitted this year from the whole of the city within the Circular-road, amounted to 3789, of whom 187 died, consequently the average mortality was only one in 20 [47-187] admissions.*

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* See Medical Report for the year 1808. George Hagan, M.D.

† See Medical Report for 1809. By Francis Barker, M.D.

‡ See Medical Report for the year 1810. By Richard Gamble, M.D.

* See Medical Report for the year 1813. By G. Hagan, M.D.

The year 1816, though so constantly cold and rainy as to destroy the sown corn and rising crops to a degree that led to famine and pestilence throughout Ireland in the two succeeding years, was itself remarkably free from both. This plenty and healthfulness were observed also over the whole of Europe. The admissions into the Cork-street hospital from the same district as in the preceding year were less by 1086, *viz.*, admitted 2703, deaths 172, average mortality 1 in 15 $^{108\text{-}173}$ admissions. The increase of the average mortality of the preceding year arose chiefly from the admission of patients labouring under phthisis and dropsy into the wards which would otherwise be vacant. This frequency of phthisis, when epidemics do not prevail or are prevented, (e. g.) small pox by vaccination, fully accords like the alternation of ague, and continued fever in the years 1808 and 1809, with the opinion long received, that many congenite diseases, which do not arrive at their acme before puberty, have their fatal ravages anticipated by prevailing and malignant epidemics.*

The miseries of famine, which succeeded the failure or destruction of crops in 1816, were simultaneous and commensurate with the sudden increase of fever in 1817 and 1818. But the growth of disease was not nearly so rapid in the metropolis as in the other parts of Ireland, where famine was not so effectually opposed by a liberal supply of food, fuel, and other necessaries of life. These coincidences must have afforded valuable instruction to those intrusted with devising preventive measures, had not the preconceived opinions of the *ultra*-contagionists fatally misled them. The same prejudice, however, still, unfortunately continued, notwithstanding that in each successive year, since other concurring and more evident causes occurred, such as heat and cold not alternating as before with summer and winter, the unprecedented privations of the working classes, and total loss of trade. The latter, too, became more and more manifest as the chief concurring causes, whilst the separate agency of contagion, according to any laws laid down by its advocates, became more difficult to be identified. Certainly, it was never proved wholly independent of other more evident causes.†

Famine being in the year 1817, for the reasons assigned, less productive of disease in Dublin than in the rest of Ireland, no additional fever hospitals were erected there. The admissions, therefore, into the primitive one, still afforded, as suggested in some of my annual reports, a tolerably accurate scale for measuring the increase of disease in this city. Moreover, it likewise assisted in showing the relative mortality compared with 1816, the preceding year; these facts may be seen in the annexed table :—

Years.	Admitted.	Died.	Average mortality.
1816	2703	173	1 in 15 $\frac{163}{173}$
1817	3682	231	1 in 15 $\frac{217}{231}$

These results, if duly examined and compared with the previous statements from the annals of the Cork-street hospitals, are quite conclusive as to the superiority of supplying the poor with the necessaries of life, which was adopted in Dublin, during the first three quarters of 1817. Surely such facts are well deserving of the attentive consideration of political economists. It appears, moreover, that though this increase of disease in Dublin in 1817, compared with other parts of the kingdom, or with 1816, which was a remarkably healthful year throughout Europe, was slight, yet compared with 1814, when the previously tardy advance of disease was opposed by the complex apparatus provided for checking contagion, there was an actual diminution. There was, therefore, a much greater number of patients in the Irish metropolis in 1815, when the most extensive apparatus ever provided against contagion was in full operation, than in 1817. But it was contemplated in the latter years only by the advocates of these measures, that a new and specific contagion had been imported, although the great superiority of the means employed in the first three quarters of 1817 over the anti-contagious apparatus, and over the principles of its adoption, was rendered still more manifest. The very great importance of the illustration afforded by the relative increase of disease in Dublin, and in other parts of Ireland from 1815 to 1817, under opposite modes of practice, will plead for dwelling so long on it. The subject demands much more space than

* See Medical Report for 1816. By Wm. Stoker, M.D.

† See Dr. Haygarth's Letter to Dr. Percival, in 1800, and Dr. Stoker's Essay on Contagion, 1829.

can be given to it on this succinct treatise. A retrospect, however, of these events in 1817 and 1818 may be found in the reports for 1820, 1821, 1823, and 1828, and are epitomized in the following table, which includes the years from 1817 to 1828, inclusive.—(Appendix, Note A.)

Years.	Admission.	Deaths.	Mortality Average.	Observations on these Annual Admissions and Deaths in the Cork-street Hospital.
1817.	3682	231	1 in $12\frac{217}{231}$	Famine stayed in the city by supply of food; raged in other parts of Ireland.
1818.	7608	258	1 in $36\frac{126}{258}$	Many other fever hospitals established in Dublin, and received vast numbers. Actual mortality dreadful.
1819.	3873	224	1 in $17\frac{134}{224}$	These admissions into the Cork-street hospital, and deaths, no longer measure the increase of disease in Dublin.
1820.	2974	203	1 in $14\frac{134}{203}$	Contagion, famine, malaria, (see report 1820, 1821) manifest their irrelative agency.
1821.	2973	246	1 in $12\frac{136}{246}$	Diseases more typhoid. See report for 1820, 1821.
1822.	2307	137	1 in $16\frac{124}{137}$	Decline of disease generally over Ireland, as happened in 1816, before increase of 1817.
Total from 1808.	46361	2869	1 in $16\frac{657}{2869}$	Compare this mortality with that of the pest of the blood, in the successive years it prevailed.
1823.	2668	241	1 in $11\frac{17}{241}$	Pest of the blood, supervened on influenza. See 2d part Pat. Obs.
1824.	4599	327	1 in $12\frac{144}{237}$	All diseases, medical and surgical, affected by the pestilence. See Med. Rep.
1825.	3878	391	1 in $10\frac{68}{381}$	Besides the peculiar characteristics of the blood, dropsy and spurious phthisis followed cases of pestilence.
Total Three Years.	11145	949	1 in $11\frac{406}{949}$	The pest of the blood, epizootic and epidemic. Its symptoms being asphyxsia, sudden death, coldness, ecchymoses.
1826.	10882	386	1 in 28½	The mortality from the pestilence of 1823 was truly awful this year, though the average mortality in hospitals was very small, from the numbers in want of trade in famine, not disease, crowding them.
1827.	6555	344	1 in $19\frac{38}{844}$	The same observations applicable as in 1826 and 1827.
1828.	2964	193	1 in $15\frac{69}{193}$	See report for 1828; decline of numbers, but mortality from the pest of 1823, sudden deaths increased, phthisis and dropsy frequent.

The average mortality in 1817, became somewhat less than in the preceding year. In both, however, the same principles and practice were pursued, in the same forms of disease as in 1810, when the first remarkable evidence of a tendency towards pestilence in the prevailing epidemic, was exhibited remarkably in the morbid appearances of the blood, and by corresponding functional derangement. Then, too, in some cases, coagulated and sizy blood distinguished the increased action of inflammation; and in other cases broken down, dark coloured blood, as constantly denoted typhoid debility in whatever stage it was observed. (See Medical Reports for 1821 and 1821.*)

* With respect to the increase of disease, down to the year 1818, it is, I believe, generally acknowledged, that it was the extension of the same form of fever, to which the increased poverty and helplessness of the people, rendered them more liable. But to account for the extraordinary increase in 1818, and likewise in 1826 and 1827, different opinions have been entertained, and different causes have been assigned. These differences shall now be detailed :—it being first premised, that as the extraordinary increase of disease in the years 1818 and 1826 were, by their manner of appearance and departure identified, or at least, as the *differences respecting them* were the same, it will not be here necessary to treat them distinctly.

When disease had advanced to so dangerous a degree as to excite very general alarm and goverment found it necessary to institute inquiries, a letter was addressed by the Secretary of State and of the General Board of Health, to the physicians of the hospital. It requested their opinions as to the *cause*, the manner in which it acted, and the most probable method of removing or counteracting it. As the answers returned to these questions were likely to direct in a considerable degree the measures about to be adopted by the board, it appeared that the duty thus required, was one of no ordinary responsibility. It was therefore with exceeding regret that I found myself *differing* from my colleagues, while it was impossible to compromise my belief. *They* were of opinion, that contagion had "acquired *within a short period* more than ordinary force;" and that it was owing to this circumstance chiefly that so many were afflicted; while I believed that disease had extended almost entirely by the miserable condition of the people. The power of contagion was not indeed to be denied; but that the increase of sickness was in consequence of the increased force which contagion had gained within a short period, or that it owed its origin to contagion at all, was what my experience seemed to contradict. As the settlement of this difference is of paramount importance to subsequent inquiries, there shall be here laid before the reader those considerations upon which I hope, in this respect, at least, to justify the singularity of my opinions.

The system of prevention, over which disease had swept with irresistible violence, has long been the subject of praise and admiration. In its formation no expense was thought too great, nor labour too severe, and in its completeness and extent it might rival the speculations of fancy, and is certainly far superior to any other heretofore established. Hospitals of extraordinary accommodation were erected in various quarters of the city with a dispatch which might well call forth astonishment. The infected were immediately removed from the healthy — their habitations cleansed in the most complete manner, to prevent contagion and malaria. In the poorest parts the streets were conveniently widened, and fountains giving a supply of excellent water were erected for all the cleansing and culinary purposes of the inhabitants. But it will be remembered, that when this fever hospital was opened, it was *the only one* in Dublin; and that so it continued for some years. During that time, it will be seen by a reference to the table, (page 9.) that disease was more effectually restrained than at any subsequent period. Now, disease was as decided in its character as contagious, and as fatal *then* as appeared for several years afterwards; for by general acknowledgement it was the same continued form; and yet one hospital, at that time of very limited accommodation when compared with the present, and with a system of prevention comparatively crude, was able to repress the influence of contagion. It follows as a necessary consequence, that if contagion had continued to act alone, this slender apparatus had been all that we required. The reader will easily perceive that this conclusion has been drawn, not so much on account of its own importance, as for the information which it directly con-

veys. First, contagion was not the cause of the increase of disease; it was merely supervening or accidental. Secondly, it is to that increasing poverty which caused such increasing exposure to the attack, and such increasing sensibility to the effect of contagion that the increase of disease is properly to be attributed. But what is the fact? The advance of poverty and disease have been contemporaneous, and if this be kept in view, it is difficult to perceive how an ordinary understanding can refuse to assent to the justness of the argument. I say this in reference to the general increase of disease, without any regard to the peculiar years, 1818 and 1826. And the reader will not imagine, that any attempt has been hereby made to deny the existence or prevalence of contagion; for my argument goes to prove, that contagion did indeed prevail, *but not by its own power*—it was the tooth, but terrible only because in the jaw of the hydra.

Now, in the years 1818, 1826, (and also 1832,) it was believed by many, whose opinions are certainly well entitled to respect, that the extraordinary influx upon the current of disease, was owing not only to the appearance of *some new epidemic, but also the suddenly increased force of contagion.* The ground of their belief appears to be, that it was difficult to assign any other cause for the prodigious numbers of the sick, and that after dismission from hospital, relapses were not unfrequent. But in matters of this nature, although it is very true, that extraordinary phenomena are to be attributed to extraordinary causes; yet, error will be most likely to prevail, if we attempt to explain rather by what might be, than what is; or, in other words, if we consult our ingenuity for a reason, rather than search through facts for the cause. The intellectual acuteness of a philosopher is one thing, and the patient drudgery of the practitioner is another; the one is the grander and more captivating; but the other is no less useful for its dulness. To the latter only, if indeed to either, can I venture to make any claim. Experience forms my theory—my chief argument is the display of facts. If then the doctrine just alluded to be tried by this test, I believe that it will fail; since it would appear that the facts on which it seems to rest will maintain an opinion not only different, but contrary.

It has been already seen that the general increase of disease was produced, not by contagion, but by misery; and the amazing power of the agent must have have been recognised in the agency. When, therefore, the question is asked, was it not probable that, in the years 1818 and 1826, misery was the cause of the unprecedented increase of sickness, is it possible to answer in the negative? Certainly not, since its previous agency had proved its power unlimited: and if at a further step it is asked, does not the greatness of the number point to misery as the cause? it cannot be denied that previous experience and probability are on the side of the affirmative. The very same may be said of the relapses. But if it should appear that the character of the increase was of a very peculiar nature, and requiring a very peculiar treatment, and that these peculiarities do not only favour but insist on the belief that misery was the cause, can any doubt remain? That such is the fact no other proof shall be given, than the particular statement of the facts themselves.

The result of a visit by two English physicians in the year 1817, seemed to me of so much importance, that in my report for 1820-1, I stated at the foot of page 42, in order to show how few of these in the hospital in that year laboured under any of the real typhoid symptoms that generally characterize the indigenous fever of Dublin. I may here also advert to a similar circumstance that occurred in 1826. That distinguished French surgeon, Baron Larrey, being then in this city, paid a visit to our's and the other fever hospitals; and as I learned, he enquired especially after those gangrenous bubos, and other attendants or consequences of bad typhus fever, which, in his conception, were necessarily the leading objects of his solicitude. On his examination, however, at the bed-side in our fever hospitals, he often expressed his surprise when on drawing back the covering, in a large proportion of the cases, he perceived, not the symptoms of typhus fever, but those of starvation.

The peculiar symptoms of that sickness which, during the years 1818 and 1826, formed the extraordinary increase, consisted chiefly in a pallid and anxious countenance, a chilled or parched skin, keen sense of hunger, extreme dejection of spirits. Such were its symptoms. It must be unnecessary to observe, that these symptoms differ from those of positive disease, rather by deficiency than contrariety, as violet differs from yellow,

or one from five. Besides this general distinction, however, there is one contrariety, viz. in the one case, there was a keen sense of hunger, in the other nausea. This deserves to be noticed more particularly, because it shewed not only a positive difference in the existing symptoms, but also a positive difference in the origin of the disorder; for, according to general experience, wherever there has been contagion there must be nausea; but that where there is no nausea there can scarcely be contagion.

The intermissions and paroxysms which universally attend malaria are too remarkable to allow, even for a moment, the supposition of their identity with the sickness in question.

Wherever, indeed, the sufferers from famine are exposed either to contagion or malaria, which have been so long rivals in their pernicious agency amongst our poor, then bodily and mental exhaustion giving a powerful predisposition to be affected; symptoms succeeded, such as frequently characterize the fevers produced by either of these morbific causes. Very often, too, as may be supposed under circumstances so favourable to the generation of contagion, it springs up spontaneously, and hence pestilence frequently succeeds to famine. But I have generally found that where fever arises from any other cause than privation of food, the effects can be as generally recognized in the characters of the disease; the typhoid form, in a greater or less degree, succeeding exposure to contagion; whilst ague, in some of its types succeeds exposure to malaria.

The distinctness of the symptoms, arising from distinct causes of fever, may be further illustrated by the fact that the nurse-tenders of the hospital on receiving successive patients, and in contagious fever from the same family are able, by describing the preceding cases accurately, to foretell a similar train of symptoms. Of the distinct natures of fever from contagion, and from malaria, another illustration is afforded by the preceding pages. It may be perceived, that in those years when, from contagion, typhus fever was most prevalent, agues were little or not at all known; whilst in other years, as in 1809 and 1828, in which the subsidence of continued fever was most remarkable, the frequency of intermittents was also most remarkable. I am the more desirous to dwell on these distinctions, from being persuaded that the great discrepancy of opinion which has for some time existed among the physicians of Great Britain and Ireland on the subject of contagion and malaria, has arisen chiefly from want of due attention to the effects of those agents separately, and also from confounding them with those from other causes. To that confusion probably may be attributed the many pernicious mistakes which have taken place, both in devising means of prevention and in prescribing modes of treatment for febrile diseases. (See my Compar. View, Dublin, January, 1822.)

With respect to the treatment, it is to be observed, that as there were different opinions on the nature of the sickness, so were there different modes of cure adopted. Those who looked upon it as a new epidemic of course treated it accordingly. The success of their mode of prevention appeared to me not to be favourable to my opinions. The success of their curative treatment I do not pretend to know; but if there be any truth in rumour, it differed greatly from that which marked a different mode. In the former case it was regarded as the mere sickness of misery, and was immediately and most effectually relieved by nourishment, a dry bed and comfortable apartment. The average mortality which ensued affords satisfactory evidence, as the reader may perceive by looking back to the column of death in this treatise during the years 1816, 1817, 1818, 1823, 1824, 1825, 1826, 1827, 1828, and comparing it with the column of admissions in these years. That sickness arising from famine was distinct in its nature from that arising from positive fever, and pointed to distinct treatment, will be still more clearly seen from tables given in the annual reports, which will show the average length of time which patients remained in the relative years of famine, compared with other years.

If, then, the peculiar character of the sickness was no more than hunger and exhaustion, and if its cure consisted in feeding and warmth and comfortable lodging, to what cause does the nature of this redundancy of sickness, if the expression is allowable, itself point?—Surely to misery, and misery alone.

In 1818, famine-fever, uniting with the pestilential disease, which was the comparatively slow growth of preceding years, the number of the sick in Dublin was frightfully increased, and though other large fever institutions were erected in the different quarters of Dublin so that 2,000 beds were provided for sick

poor in fever or famines, till 7,608 applicants were received into the Cork-street hospital alone. By far the largest proportion of these, however, were cases of famine rather than of pestilential fever, and demanded judicious administration of food and other necessaries at home, rather than medicines after admission into the hospital. This fact is important in its application, both with a view to medical and political economy. As a further illustration in connection with it, it should be stated that under appropriated treatment of the different classes of cases of disease and misery, there were but 158 deaths among the 7,608 received into the Cork-street fever hospital, or 1 in 30 126-268ths. The question of an imported contagion was also a subject of anxious discussion in 1817 and 1818, as may be seen in the annual reports. The description of this period the epidemics of the preceding nineteen years equally applies to.

In the succeeding four years, 1818 to 1822 inclusive, (see the reports from the Cork-street hospital for that period), the relative effects of destitution, contagion, and in a less degree, malaria, were distinguishable; but as appears in the preceding table, neither the average numbers admitted, nor the average mortality exceeded that of the seven preceding years.

The epidemic of 1823, (see my report from the fever hospital, and the first part of my Pathological Observations, both published that year), underwent a more extraordinary revolution than any I witnessed before or even since. Its new characters, too, were diminished temperature, loss of vital power, with corresponding asphyxia, dark petechiæ, and ecchymoses with jaundiced interstices, extremities blue, severe vomiting and mucous diarrhœa, the discharge varying from orange-coloured and green, to black; sometimes colourless, as in Lienteria. Fatal terminations and sudden, often preceded by metastases. Paralysis and dropsy, also frequently succeeded to or attended on protracted cases. These aggravated characteristics were still more manifestly connected than in the epidemics of 1810, 1817, and 1818, with corresponding changes in the external characters of the blood, drawn in the course of disease, or found gorging the large blood-vessels after death, and corroborated the opinion I had previously expressed, of the blood being the chief seat of typhoid or adynamic as well as of pestilential diseases. I had, however, never before witnessed except in a few sporadic cases, nor seen described by the writers of the 18th century, characteristics so formidable, nor morbid changes in the blood corresponding with them in the same degree. The malignity of the epidemic constitution of the air was otherwise very remarkable at this time (see table), and, as may be seen in the medical journals of that day, it interfered with the recovery of patients after surgical operations both in this and the sister kingdoms. Besides slight punctures received while dissecting in the anatomical theatres, were often succeeded by sudden fatal attacks of typhus disease. That the malignant influence of the air was not only epidemic but epizootic was proved also by its symptoms, such as dark petechiæ in all parts of horses uncovered by hair, (the tongue, nostrils, &c.) by glandular tumours, both internally and externally on the same animals; by hepatization of the lungs and vascular congestion; dark and clotted blood, and corresponding changes in that drawn or effused in the course of disease. Numerous cases of this sort were presented to me by our eminent veterinary surgeon, Mr. Watts.* Through

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* That the practice of physic may be even much more improved by comparative pathology than the knowledge of the human system by comparative anatomy, can hardly be questioned by any one knowing how boundless the field of inquiry is in the one case compared with the other. But independently of this, the greater simplicity of the organs of other animals, and of the diseases of these organs, than in man, greatly aid the physician in detecting (if there be any) of the traces of similar diseases after death. In the cases and dissections of the horses referred to in the text, the advantages of examining them very shortly after death, essentially promoted my leading objects, namely, to detect as far as possible the transaction of disease from the morbid fluids to the morbid solids, and *vice versa*. These symptoms of the epidemic, such as loss of pulse and warmth, coldness of breath, skin dark, and clotted blood, ecchymoses, sphacelus, abnormal motions and sounds of the heart, *bruit de soufflet*, in the thorax were all common to the human patient and the sick horse; so were hepatization of the lungs, infraction of the liver; ingorgement of the heart, with dark coloured blood, and also of the large blood-vessels in every part of the body, with the same. Besides these appearances, common to all animals after death, of the then prevailing disease, there was

his kindness I witnessed the course of the disease, and the appearances found on dissection in a much shorter time after death than could have been attempted in the human subject. It was likewise in 1823 that I examined the temperature of the malignant typhus that then prevailed, and the results were, that even the *calor parum auctus*, of Cullen, was not then applicable to the prevailing distemper, as in many cases the thermometer stood much below 96°. So that fever and *Pyrexia* were then as unsuitable denominations for the existing epidemic in Ireland as *Cholera* and *Typhus* for that which afterwards committed such ravages in Europe in 1830, 1831, 1832, 1833, 1834, and 1835. In the same year I was also fortunate in proving by experiments that the buffy coat on the blood, drawn either in inflammatory or dropsical complaints, did not depend as previously supposed, on slow coagulation or on the subsidence of red particles, but probably on functional derangement of the chemical affinities subtending to vital power which my experiments in 1807 indicated in the organs of sanguification. If compatible with the space that could be here given to it, it could be shown that great advantages, both in theory and practice, are derivable from the results of the foregoing observation, but reference on that subject to my Pathological Observations, published in 1823, 1828, and 1830, must for the present suffice. (See 1st, 2nd, and 3rd part of my Pathological Observations.)

2668 patients were admitted into the Cork-street Hospital that year, and 241 died, the average mortality being 1 in 11 [217-241]. Now from the opening of the hospital to the conclusion of the preceding year, it was but 1 in 16 [124-137].

The numbers admitted into the Cork-street Hospital, during the three succeeding years, viz., from 1823 to 1825 inclusive, (though then other large fever hospitals were established in every quarter of Dublin) were 11,145, of whom 945 died, shewing average of 1 in 11 [409-943]. Thus the virulence of the epidemic constitution of the air that year was exhibited.

The same symptoms continued with as fatal consequences in 1826 and 1827, as in the preceding three years, but owing to the admission of many not labouring under positive disease, the average mortality in the hospitals was less, viz.; 17,426 were admitted into the Cork-hospital, of whom 726 died. To those who witnessed the fever of 1826 and 1827, it is hardly necessary to state, that coldness of the surface and of the breath, asphyxia, blue or purple colour of the extremities and frequent fatal terminations, accompanied by purging and vomiting were then also often to be met with. So much so, indeed, that Baron Larrey, who visited the Cork-stret Hospital at that time, has since stated, in his Treatise on Cholera, 1830, how much the disease he then saw in Ireland resembled malignant cholera.

The year 1828 was distinguished by diminution, both in the number of admissions and of deaths in the fever hospital; but this temporary decline cannot have resulted from a favourable change in the epidemic constitution of the air, for the cases still, in many instances, presented the same symptoms of malignancy, and the blood still exhibited the same pitchy and clotted appearance, whether drawn in the course of disease, or examined in the large vessels after death, as may be seen in the report for that year. Indeed, in all the cases in that report, both those who laboured under exanthematous and other fevers, tic doloureux, and dropsy, and the cases of some horses whose dissection is also given there, the same morbid influence of the prevailing condition of the atmosphere, was strikingly apparent.* To illustrate the nature of the fever of 1828 and the mode of treatment employed, I shall take the liberty of submitting the following abridgment of a few cases noted at that time, and published in the Annual Report of that year.

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copious effusion internally of lymph, partly coagulable, but rarely any adhesive inflammation. In now republishing this note on my report for 1823, I may also observe, that in the spring of 1833, when a fatal influenza was both epidemic and epizootic in Great Britain and Ireland, Mr. George Watts, jun., kindly gave me for the Surgical Society, a report of cases and dissections of horses, both here and in England, in which the symptoms, preternatural alterations of the blood, and *post mortem* appearances, corresponded minutely with what Mr. Watts, sen., and I had together witnessed in the epidemics of 1823 and 1827.

* See Report for the year 1828 by William Stoker, M. D., particularly from the 79th to 109th page, and from 143d to 161st inclusive.

John Baker, aged 64, of a broken down constitution, attacked on the 10th of December, 1828, was admitted into the hospital on the 13th of the same month. His countenance then was sunk, his eyes anxious and hollow, his voice almost inaudible; the skin was generally cold and clammy, and of a livid hue, particularly on the extremities; constant diarrhœa, general spasms, no coma, or delirium. On getting some warm wine, which he drank with avidity, and warmth being applied to his limbs, the pulse became perceptible. Camphorated mixture, with the aromatic spirit of ammonia was then prescribed; and turpentine enemeta, with frictions of turpentine, were directed. Under these remedies, with the addition of turpentine in draughts, and a blister to the neck, he improved for some days, but on the morning of the 19th December, after walking to the fire without assistance, he suddenly expired. After death, the skin resumed its purple motly appearance. Dissection was not permitted by the managers of the hospital.

James Crotty, after eight days' illness, was admitted on the 23d December, 1828, apparently moribund: his head was drawn back, and the trachea protruded by spasm; temperature under the tongue, 90°. Nearly the same remedies were employed as in the last case, and with the same temporary benefit, but general spasms set in, and he soon afterwards expired. The purple colour of the body continued.

Mrs. Edwards, aged 28, was admitted 6th December, 1828, in the last month of gestation. Skin cold and clammy, extremities purple, eyes sunk, features collapsed, voice scarcely audible. Besides particular attention to the state of pregnancy, a similar practice as in the preceding cases was adopted, but the powers of life gradually declined, and the motion of fœtus in utero, diminished until death of both took place on the 9th of the same month. On *post mortem* examination, besides evidence of much chronic disease in the cranial and thoracic viscera, the vessels and the surface of the brain were darkly tinged. The lungs were hepatized, and of the same purple appearance as the extremities. These latter results of diseased action were most probably of no long standing, and seemed the immediate cause of death.*

* A particular description of the examination by Surgeon Trant, by whom I was assisted, is given at the 453d page of my Report.

The general and very decided check to to the growth of disease, which has been already stated to have occurred in 1828, I always attributed to the fillip then given to our sickly *retail trade;* and gladly quoted it as evidence of the buoyancy of this country, when relieved from a concurring cause of its aggravated calamities. Moreover discord at once the parent and child of such calamities, ceased during the transient period of prosperity. With respect to the remedial measures, my subsequent experience of their efficacy further warranted me in recommending those I had employed in the aggravated form of the epidemic, in the year 1823, and which I believe, were in both cases, essentially the same.

In the year 1829, the same prostration of strength, diminution of animal heat, suspension of the vital powers, and other symptoms of malignity prevailed as in the year 1828. The average mortality for that year was nearly the same as in the preceding year, namely, 234 deaths, and 2,839 recoveries, or 1 in 21 $^{31\text{-}234}$. In the report of that year, too, it may be perceived that several cases then detailed of typhus, and of dysentery, hepatitis, and rheumatism, were accompanied by some of the symptoms above alluded to. These cases seem to me to have suggested to the author of that report the term cholera, in a preceding page.*

Having repeatedly announced, from the beginning of the year 1830, that the epidemic had, in a large proportion of cases, both in hospital and private practice, assumed characteristics of malignant diarrhœa, resembling those diseases described on the Continent, and in the East of Europe, and therefore demanding particular attention, I have drawn up a table of admissions and deaths for each month during 1830, 31, 32, and for the first two months of 1833, with a view to that vital question. I have ever avowed the same opinion, and I feel it my bounden duty, however misconceived or misrepresented, still to maintain that rigorous investigation on that subject is necessary for public security.

From that table it appears that the

* See Medical Report from the Fever Hospital and House of Recovery Cork-street, for the year 1829. By John O'Brien, M. D., &c. &c.

mortality of 1830 and 1831 was nearly the same as in that of 1823; and the mortality of 1832, excepting in the first quarter, when it was 1 in 8 41-93, and in the other 3 was only in 14 107-138; but in the month of June, when cholera was most malignant, and therefore unfortunately was excluded, the mortality was only 1 to 32⅝. This relative diminution in 1832, arose from the fact, that in the months of November and December, 1831. and January, February, March, and April, 1832, causes of the prevailing epidemic, not being yet acknowledged as such, were admitted indiscriminately (the mortality of those months was therefore increased); but during the remainder of the year 1832, when the epidemic was most malignant, severe cases were excluded from the wards of the hospital, and sent to the establishments for the reception of cholera patients. The mortality during the latter months of 1832, was therefore less than in the corresponding months of any year since the Cork-street hospital, according to the first resolution of the trustees, was opened, "for the relief of the destitute poor afflicted with fever, and to check the progress of contagion, as well as acquire and diffuse medical knowledge." (See my comparative view of Cholera Morbus, January, 1832).

(To be continued).

The Medical Witnesses Bill and the Medical Gazette.

When the Medical Witnesses Bill first become the law of the land, we gave it our most conscientious and strenuous support. We did not hail its appearance as issuing from, or for the benefit of, any party, but we regarded it as a measure affecting the entire profession; as a salutary enactment which conferred a benefit on medical men in general. Whatever our principles might have been regarding the great question of reform, we should never have thought of opposing a bill of this description, because it might have chanced to issue from a political enemy. There never could have been, so far as its political character is concerned, a measure so little to be objected to, if any objectiou would be raised against it, by any party. It interfered with no established laws, it overthrew none of the powers with which our corporate medical bodies, however unworthily, are endowed; it threw open no avenue through which we conceived it possible any party, or section of a party, could wish to enter; but it released men of all parties in the profession, from a most serious tax upon their time; from an evil which pressed most heavily on the time of the practitioner, and which was generally and properly considered as unjust and oppressive. This was the light on which we regarded the bill in question, and we see no reason after a lapse of some months to alter our opinion. It would not be difficult, perhaps, to trace the causes which have produced the malignant, yet, however, opposition to this measure in the "*Medical Gazette,*" after its avowal of the usefulness and value of the measure—an opposition which has been carried on in such a spirit and with so little regard to the general decencies of discussion, that had it been consistent or talented, would still have fallen powerless. We have no hesitation in believing and declaring, that it was the *success* of the Medical Witnesses Bill, and that alone, which called up the rancour of the Gazette. If not so, how was it that the vote of thanks passed on Mr. Wakley by the Bucks Medical Association; for having brought forward and carried this bill, was stifled in the Gazette, and that on the following week a violent tirade against the measure appeared in the columns of that journal. True it is, it may be said, that other votes of thanks sent by the above society were also withheld; but had there been inserted, the gross enmity of the Gazette and its motive for attacking the Bill would at once have been observed. Besides, what did the Association thank the worthy editor for? why for his opposition to self-supporting dispensaries. Probably the scribe looked on this vote of thanks as a sneer, and therefore withheld it; for it must be known to all—all those at least who read his journal—that he has always supported these frauds on the profession, that he continues to support them, and only last week devoted several columns to an address from the original propounder of the scheme, that itinerant defamer of medical men, Mr. Smith, of Southam. We believe then that it was the success of the Bill which called forth the harmless scribe of the Gazette to attack it, with a consistency which must ever remain as a memorial of his sincere love of candour. Look at the kind of opposition which has been advanced, forged letters and supposed cases led the way, then followed the silly communi-

cations of one or two correspondents, who either evidently knew little of the real nature of the act, or had some motive in not wishing to understand it. We say this, because a more concise, or a plainer form of law was never laid down; he who runs may read and understand it. How could the correspondents of the Gazette expect that they would receive the benefit of a law which they themselves had not complied with? we can fancy them being annoyed, if not knowing the act, they attended an inquest without a special order from the coroner, but there arose, not from the imperfect nature of the Bill, but from the ignorance of those whose interest it concerns. Such a letter as that of Chirurgicus, and the article which accompanied it, we think with Mr. Theobald, hardly worthy of notice, were it not, that there are many people in the world, who might wish to throw obstacles in the way of the Bill, and that they would be incited to do so by such writings. This the Gazette knew, and it was for this purpose its opposition has been advanced. The payment of a fee to a medical witness is either desirable or it is not; if it is desirable, then we say that every friend to the profession would support a measure conferring such benefit. Even had the measure been defective, we say no friend of the profession would endeavour by abuse and opposition to make that deficiency irremediable. But when a wolf in sheep's clothing, a pretended friend, attacks an effective measure, and tries to raise up the parish authorities against it, does all he can to retard the useful action of the law, and all under the mask of friendship, we say he is a dangerous and malignant enemy.

JUNIUS.

NORTH LONDON HOSPITAL.

CHOREA.

Richard Leynvar, aged 11, was admitted Oct. 12, under the care of Dr. A. T. THOMSON, was playing with his schoolfellows a week ago, and was seized with shaking of his left arm, and was unable to keep it steady. A week before this attack he fell on a desk, the edge of which struck his abdomen, and frightened him very much. He has fits once or twice a day, and becomes insensible. The attacks affect the left arm and thigh, the right eyelid, and the head; he can hold his hand quite steady generally, as the attacks of Chorea are only occasional. Tongue red at the tip, no pain in the head, pricking pains in the arms and thighs, bowels confined, pulse natural, skin cool, head hot, no thirst, the head to be shaved.

℞ Hydrarg. Submur. gr. ij. statim.
℞ Magnes. Sulph. ℥vj.
Infusi Sennæ, ℥ij.
Mist. Camphoræ, ℥ij.
Mist. capiat partem 3iam, 3tia quaque horâ.

14. He is much better, since the head was shaved, and has had no fit since.

Aqua frigid. capit. applic.
Hirudines Oj. capit.
Medicam rept.

17. Has had no attack since, feels quite well; discharged cured.

RHEUMATISM.

Hydriodate of Potash.

B. H., aged 48, was admitted, Oct. 1, a baker, of regular habits; has been subject to Rheumatism for twelve years; he had an attack in the feet and hands a month ago, from having got wet. At present he complains of pains in all his limbs, and is not able to stand; he has a slight cough; pain on the surface of the chest, swelling of the small joints, pains increased by cold and relieved by heat; urine high-coloured and scanty, bowels open, no perspiration at night, skin dry, thirst, tongue white, pulse regular.

℞ Solution Hydriod. Potass. ♏ xxv.
Aquæ ℥ iss Fiat haust. tertiis hor. sumendus. Middle diet.

4. The urine is increased in quantity, and he feels rather better. The sensation of cold is not so great as it was. The solution increased to forty minim doses.

5. The solution increased to forty-five minims.

6. He is rather better, though the improvement is slow. The swelling in the joints is less, his urine is still more increased in quantity; fifty minims of the solution for a dose.

13. He is better, but suffers from pain; his bowels are confined, tongue coated; sixty-five minims of the solution.

℞ Haust. Sennæ. Comp. statim.

14. Seventy minims of the solution.

The eyes are slightly red and discharge a little; his urine is at present not much increased; he feels reduced in strength; the pains are gone out of the bones, and are in the joints.

19. The pains are much relieved; he is able to get out of bed, and can stand.

24. The pains are gone, and there now remains only some swelling of the joints. Kept improving until the 28th, when he was discharged.

C. S., aged 30, was admitted Oct. 1. a Polish soldier, much exposed to the weather; complains of rheumatic pains in the left side, and in some part of the back. The ribs are tender on pressure; the pains are increased on turning, or by any motion, and by a deep inspiration; constant pain in the head; pains increased by cold, and relieved by heat; he can never sleep until midnight; has been long subject to rheumatism; has no cough; urine abundant; pulse 80; small; skin cool.

℞ Solut. Hydriod. Potass. ℳ xxv.
Aquæ Puræ ℥ iss. Fiat.
haust. 6ta quaq. hora sumendus.

3. He is considerably improved, and has less pain.

5. His pains are increased of an evening, and he feels hot at that time; he is to omit the draught, and takes,

℞ Quininæ Sulph. gr. ij.
Infusi Quassiæ ℥ iss. F. haust.
Tertia quaque hora sumenda.

7. He is much better, but suffers pain at the epigastrium, for which ten leeches were applied, and relieved him.

12. Discharged cured.

THE METROPOLITAN UNIVERSITY.

To the Editor of the Medical and Surjical Journal.

Sir,—In common with many of my friends, I have been astounded at the heterogenous mixture of the Senators of the new University, many of whom are wholly unknown to the profession, even in their own country. The selection of most of the new examiners has been most unsatisfactory; for, were I to comment upon their pretentions as others have done, I could easily shew them to be most slender. I am very much disposed to think that this abortive scheme is a poor substitute for medical reform: and should this be the case, Mr. Warburton, to whom the thanks of the profession are due for the Anatomy Act, will very seriously disappoint the expectations of the medical reformers.

The Medical Committee of the House of Commons put the country to great expense; and the public, as well as the profession, had every reason to expect some legislative enactment for the better regulation of the study and practice of medicine in this kingdom. The new University is a bad apology for a general law, which is so loudly demanded, for the protection of the public health, and the better regulation of every class of medical practitioners. I cannot bring myself to believe that Mr. Warburton will abandon the great object he had in view, which was calculated to pass his name down to posterity as one of the best friends of medical science and humanity of the era, in which he lives.

I am, Sir,
Your obedient servant,
A Medical Reformer.

The London Medical
AND
Surgical Journal.

Saturday January 14, 1837.

THE NEW LONDON UNIVERSITY.

In forming a body of *examiners* for the purpose of granting Medical Degrees, it is surely a most mistaken notion to suppose that such men should be chosen only from amongst the most eminent and distinguished members of the Medical Profession. It is of far more importance that they should be selected from the disinterestedness of their position, their kindly feeling and consideration towards the student, and above all, for their moral worth. It ought to be kept in mind, that the most talented individuals, those who have the largest

stock of professional knowledge must, in performing the duties of an examiner, select such subjects for examination as are most proper and essential for the student to have become acquainted with, and in proportion as he selects these questions with care and judgment, so must he put the very same series of questions again and again, when examining others on the same subject. This is so notorious, that pupils who are preparing to pass the College of Surgeons or Apothecaries' Hall, or seeking a degree at any of the Universities, are furnished with *a list* of all questions which may be put to them by individual examinators, such lists being made out by *Grinders* who, from experience, learn from those who have been examined, the usual questions which were asked by each examinator. If therefore any particular class of individuals could have been better qualified than another for examining students, none certainly could be so well qualified as those very individuals, who under the name of *Grinders* are most usefully employed in methodising and arranging as well as affording ready means of acquiring the knowledge which the student requires for passing examinations.

If the qualifications of the individual examinators of our medical corporations had been chosen by the Chancellor of the Exchequer as a *model* for the senate of the New University, much more serious errors would have been committed than can reasonably be found in the choice which has been made. The examinations of the College of Surgeons being selected from the *ruling body* of their Council, and that ruling body being composed of the most base and corrupt materials, and the whole system of granting their diplomas having been to enrich themselves and the college, the examinators have therefore amongst their number some of the most disrespectable, incompetent, and unprincipled, as far as public principle is concerned, individuals of which the college can boast. The Chancellor of the Exchequer is therefore entitled to the grateful acknowledgments of the profession for having excluded from his list all and every one of the corrupt junta of Lincoln's Inn Fields! There may have been amongst that disreputable conclave, a few, though very few, individuals whose names, if they did not reflect honour, would not have discredited the medical senate of the New University, though certainly it was much more wise to select men equally respectable, and who had not been contaminated in the atmosphere of monopoly and misrule.

Disregarding as we have done the necessity of any *extraordinary* talents as a necessary requisite of an examination, and gratified as we are to see a new Institution bereft of the fraudulent materials on which the superstructure of the old corporations was founded, we are nevertheless perfectly sensible of some *blemishes* which appear in the construction of this new University even at its birth; and it is the duty of all those members of the profession who are the sincere well-wishers of a national Institution to co-operate and to use their best efforts at this moment to correct such defects in the foundation, which, were they allowed to pass over, and once get the sanction of the legislature, would infallibly lead sooner or later to a system of monopoly equally odious as that which now exists in the antiquated institutions. Whilst therefore many very respectable individuals

are nominated in the Senate—individuals known perhaps only in the middle paths—but by far the most secure, and not the least honourable path in life; there are others whose conduct must be carefully watched. There are amongst them individuals who have risen from the most humble condition, and have attained high situations and distinguished honours, *not* for their literary or scientific acquirements, or for their intellectual endowments, but they have acquired place, rank, and riches by folly and intrigue. There is nothing so likely to keep in check such individuals, and to preserve purity in the medical senate, as the *small* pecuniary reward which they will receive for their labour, and whatever grant of money may be asked for by the government for the purposes of the University, undoubtedly the Commons will not be too prodigal in their disbursements from the public purse. Let it ever be remembered that it is to the success of the fraudulent measures of our corporate bodies in extorting money that it has rendered them so vicious and so obnoxious to society.

MEDICO-CHIRURGICAL FORMULARY, 1837.

(Continued from page 574.)

Liniment. Calcis Compos.

℞ Olei Lini; Liq. Calcis āā ʒiv.; Liq. Opii Sed. ʒj.—vel Morphiæ gr. ij. M.

Applied to burns aud scalds, spread upon lint, and frequently renewed.

Linimentum Cantharidis.

℞ Tinct. Cantharidis ʒj.; Sp. Camphoræ ʒ ij. M.

Used in paralysis, and when stimulation is required. It may be combined with camphorated liniment.

Linimentum Hydrargyri.

℞ Ung. Hydr. Fort., Adipis, āā ʒ iv.; Camphoræ ʒ j. Sp. Rect., m xxv.; Liq. Ammoniæ ʒ iv. M.

In venereal nodes and tophi, indolent swellings; and to excite absorption ʒj. m. n.

Liniment. Hydrar. Proto-Iodureti.

℞ Hydr. Proto-Ioduret. ʒ j.; Olei Olivæ ʒ ij.—iij.; Morphiæ gr. ij. M.

In cutaneous scrofula, complicated with syphilis; and used as the preceding mercurial liniments. M. Magendie prescribes ℈j. of the Proto-Ioduret and ʒ jss. of Adeps; and the same proportions of the Deuto-Ioduret as ointments.

Linimentum Iodinii.

℞ Linimenti Hydr. Ph. Lond. ʒ ij; Potassæ Hydriod. vel. Plumbi Iodureti ʒj.—ʒ ss.; Liq. Opii Sed. ʒj. M.

Very efficacious in discussing painful nodes, or venereal swellings on the long-bones, wrists, ankles, &c.

Linimentum Nucis Vomicæ. (Magendie.)

℞ Sp. Nucis Vomicæ ʒ j.; Liq. Ammoniæ ʒ ij. Misce.

Employed in paralysis and spasmodic cholera with good effe cts.

Linimentum Opiatum, *vide* Lin. Anodynum.

Linimentum Stimulans, *vide* Lin. Ammoniæ *cum* Lytta.

Linimentum Sulphuro-Saponceum. (Jadelot.)

℞ Potassæ Sulphatis ʒ vj.; Saponis Albi, Olei Oliv. āā ℔ ij.; Olei Origani *vel* Lavendulæ ʒ ij. Misce in usum.

Employed in obstinate psora, when other remedies have failed.

Linimentum Terebinthinæ.

℞ CeratiResinæ, Ol. Terebinth, āā ℔j. M.

Employed in burns, paralysis, and want of power to use the limbs after rheumatism.

Liquores. (Ph. Brittan.)

Lotiones.

Lotions are local baths applied to diseased parts. *Vide* Balnea Collyria, Fomentationes, Injectioles.

Misturæ. (Ph. Brittan.)

Mistura Acidulata. (H. of Germ.)

℞ Acidi Nitrici ʒ ss.—iss.; Aquæ Destill. ℈ iss.; Sp. Laven. C. ʒ iv.; Syrupi Canellæ vel Aurant ʒ iss. M. Dosis ʒ iss. vel cyathus vinosus ter quaterve in die.

Very efficacious insecondary syphilis, chronic hepatitis, chronic indolent ulcers of the leg, obstinate cutaneous diseases, typhus, and in chronic diseases of cachectic habits.

Nitric, muriatic, and sulphuric acid is added to barley water properly sweetened, and called lemonade by the French, so as to form an agreeable acid drink in febrile diseases. This combination is also much used in this country (see my edition of Hooper's Physicians' Vademecum 1837).

Mistura Aloetica Co. cum Ferro. (Ryan.)

℞ Decocti Aloes C., ʒ iij.; Mist. Ferri C. ʒ iv.; Tinct. Card. C., Tinct. Sennæ C. āā ʒ iv.; Olei Menthæ Pip. ♏ v. M. Dosis ʒ ss. bis vel ter quotidie.

In anemia, after abortion, uterine hæmorrhage, chlorosis, and in cases of very pale, delicate, nervous, and hysterical women affected with atony of the digestive organs, constipation, or amenorrhœa. This medicine improves the general health, restores the appetite, revives colour on the countenance, and, to use an antiquated phrase, "makes red blood." When the digestion is very bad, ʒ j. of tinc. gentianæ vel Cascarillæ may be substituted for the same quantity of the Decoct. Aloes C. The hydriodas ferri and tart. potassæ et ferri are employed in similar cases with great advantage.

Mistura Amara.

℞ Tinc. Gentianæ C. ʒ j; Aquæ Menthæ Pip. ʒ viij. M.—ʒ iss. 3 in die.

Mistura Amara Acidulata.

℞ Infusi Quassiæ ʒ vj.; Olei Menthæ Pip. ♏ v.; Acid. Sulphur. Dil. ♏ x. M. ʒ ss. 3, 4, in die.

Mistura Amara C. Quinia.

℞ Misturæ Amaræ ʒ viij.; Quiniæ gr. viij; Olei Menthæ P. ♏ v.; Acidi Sulph. Dil.. ♏ x. M. ʒ ss. 3, 4. in die.

Mistura Ammoniaci C.

℞ Mist. Ammoniaci ʒ iv.; Misturæ Tussicæ ʒ ij.; T. Camph. C. ʒ iij.; Antim. Tart. gr. j.; Tinc. Scillæ ʒ ij.; Acidi Hydrocyanici ♏ vi.—M. Dosis ʒ ss. ter materve in die.

In chronic bronchitis, or winter cough which has returned for some years, and in asthma.

Mistura Anodyna.

℞ Aquæ Menth. Pip. ʒ vj.; Liq. Opii. ʒ j. Magnesiæ Calc, ʒ iss. M.—ʒ ss. p. r. n.

Mistura Anodyna Mucilaginosa.

℞ Mucilag. Acaciæ ʒ ij.; Aquæ vel Aquæ Menthæ Pip. ʒ iv.; Theriacæ Vel Syrupi ʒ ij.; T. Camph. C. ʒ iij. M.

In Catarrhal affections.—(See Linctus.)

Mistura Anthelmintica. (H. of America.)

℞ Bals. Copaibæ ʒ ij.; Sodæ Subcarb. ʒ j.; T. Opii ♏. xl—ʒ j.; Emulsionis Amygdal ʒ iv. M. Dosis coch. med. vel ampl. tertiis horis.

In verminous complaints.—(See Linctus Terebinth.)

Mistura Aperiens.

℞ Mag. Sulph. ʒ j; Aquæ Ferv. ʒ iij.; Coccinellæ Pulv. gr. j.; Olei Menth. Pip. ♏ j.—M. ʒ j singulis vel secundis horis.

It is often necessary to prescribe some aperient pill with this mixture.

Mistura Aperiens vel Purgans.

℞ Mist. Aperientis ʒ j.; Infusi Sennæ C. ʒ vj.; Pulv. Zingiberis gr. x. M. —ʒ i. secunda vel tertia hora.

Altera.

℞ Mag. Sulph ʒ ij.; Mag. Carb. ʒ j; Aq. Menthæ Pip. ʒ viij. M.—ʒ j secundis vel tertiis horis.

Mistura Aperiens Antimonialis. (British Military Formulary.)

℞ Mag. Sulph. ʒ ij.; Antim Tart. gr. i.—ij.; Aquæ Menth. P. ʒ viij. M.

Very much employed in British Military Hospitals in inflammatory complaints, and as a common purgative. The addition of the antimony renders it more efficacious.

Mistura Assafœtidæ.

℞ Tinc. Fœtidæ ʒ i—ij. Aquæ Menthæ Pip. ʒ vj.; Syrupi Aurant ʒ iss.; Spt. Lavend. C. ʒ j.; Tinc. Castorei; Tinct. Valerian Ammoniatæ āā ʒj.; Tinc. Opii ʒ j. M. Dosis ʒ ss. secunda vel tertia hora.

In frequent hysterical fits.

mistura Astringens.

R Misturæ Cretæ ʒ iij.; T. Kino, T. Catechu āā. ʒ ii—iv.; Liq. Opii ♏ x. —xx.; Syrupi ʒj.; Olei Anisi ♏ iv. —vj. M. Dosis ʒ j post singulas sedes liquidas.

In diarrhœa of children, accompanied by gripings and want of sleep.

Altera.

℞ Mist. Cretæ ʒ vj.; Tinc. Catechu, T. Kino āā ʒ iv—vj. Ext. Hæmatoxyl. ʒ j—ij.; Liq. vel Tinc. Opii ʒ j.; Olei Menthæ P. ♏ v. M.—ʒ ss. singulis vel secundis horis.

In obstinate diarrhœa and dysentery.

Mistura Astringens Anti-hæmorhigica. (Ryan.)

℞ Plumbi Acet. gr. vj.—xx.; Acidi Acetici Diluti ʒ j.; Aquæ Menth. P. ʒ iv.; Liq. Opii ʒ ss.; vel Sol. Morphiæ Acet. ♏ xx.—xxx. M. Dosis ʒ ss. secunda vel tertia hora.

Extremely effectual in hæmoptysis, hæmatemesis, hæmaturia, epistoxis, metrorrhagia, intestinal hæmorrhage, dysentery, and as a hæmastatic or anti-hæmorrhagic remedy in all passive discharges of blood. This formula is preferable to that for pills of the Acetate of Lead.

Altera. (H. of Germ.)

℞ Ol. Terebinth., Bals. Copaibæ, Ol, Succini āā ʒ iv. Sumat æger ♏ xxx. —lx. ex aque cyatho ter quaterve de die.

In blenorrhagia and nocturnal pollutions. In the latter cases a full dose of opium or some other sedative ought to be administered at bed time.

Mistura Balsamica. (H, of Italy.)

℞ Syrupi Tolu, ʒj.; Emuls. Acaciæ ʒ viij.; Ol. Amygdal. Dulc. ʒ iss. M. ʒ ss. quartis horis.

In chronic pulmonary catarrh, blenorrhœa and blenorrhagia or gonorrhœa.

Altera. (H. of Germany.)

℞ Bals. Copaibæ ʒ iss.; Mucilag. Acaciæ q. s. Syrupi ʒ viij. M. ʒ ss. quater indies.

In gonorrhœa and chronic bronchitis.

Mistura Camphoræ. (Ph. Lond.)

This contains ℈ j—Oj and is greatly improved by the addition of ʒ j. magnesia as prescribed by the Dublin College. The dose is ʒ ssj. every three or four hours.

Mistura Cathartica. See Mistura Aperiens.

Haustus Niger.

℞ Infusi Sennæ ʒ xij.; Mag. Sulph. ʒ iv.; T. Sennæ ʒ iss.; Syrupi Zingiberis ʒ j.; Sp. Amon. C. ♏ xx. M.

This was formerly called the "Black Draught," and is still very much used as a purgative.

Mistura Diaphoretica.

℞ Aq. Menth. P. ʒ vj.; Liq. Am. Acet. ʒ ij.; Ant. Tart. gr. j.—ij.; Sacch. ʒ ss. M. Dosis ʒ ss. secunda vel tertia hora.

Mistura Diuretica. (H. of America.)

℞ Sp. Ætheris Nitros. ʒ j.; T. Scillæ ʒ ij. M. ʒ j. sæpe in die ex infuso Juniperi.

Altera.

℞ Potassæ Acetatis ʒ iij. — iv.; Aq. Menth. P. ʒ vj.; Tinc. Digitalis ʒ j;. Tinc. Scillæ ʒ ij.; Sp. Æther. Nitros. ʒ iij. M. Dose ʒ ss. three or four times a-day in dropsies.

I frequently alternate from ʒ j.—iij. of hydriodate of potass with the acetate in this mixture with much effect.

Mistura Effervescens.

℞ Sodæ Carbonatis ℈ j.; Aq. Menth. Pip. ʒ iss.

℞ Acid. Tartarici gr. xiv. Misce.

Altera.

℞ Sodæ Carb. ʒ iv.; Aquæ ʒ v.; Ant. Tart. gr. j.; Sacchari ʒ j. Sit mistura cujus capiat cochl. duo ampla, cum uno succi limonis recentis, in actu effervescentiæ, secunda vel tertia hora.

This was the anti-emetic mixture of Riviere and is rendered more effectual by the addition of ʒ j. of T. vel Liq. Opii.

Mistura Emeto-Anodyna. (M. de Sante.)

℞ Syrupi Simplicis ʒ j,; Aquæ ʒ iv.; Ætheris Sulphuric. āā ♏ xx.; Tinct. Opii, Antim. Subsulph. gr. ij. M. Dosis ʒ ss. singulis horis.

Anodyne and expectorant.

Mistura Guaiaci C. (Ryan.)

℞ Mist. Guaiaci, Ph. Lond., ʒ vj.; Liq. Colchici ♏ xx.—xxx.; Liq. Opii ʒ ss.—j.; Potassæ Hydriod ʒ j.—iss.—ij.—iij, M. Dosis ʒss, 3 4 in die.

Very efficacious in chronic rheumatism, and thickening of the joints after gout.

Mistura Potassæ Hydriodatis.

℞ Potassæ Hydriod. ʒ j.—iss, ij.—iv.; Aq. Menth. P. ʒ viij.; Sp. Lavend. C. ʒ j. M. Dosis ʒ ss. 3 in die, et post hebdomadam 4 in die.

Employed in hypertrophy of organs with great success.

Mistura Potassæ Hydroid. C.

℞ Misturæ ut supra præscript ʒ viij.; Tinct. Digitalis ʒ j. — iss.; Liq. Colchici ♏ xiv.—xxx.; Acidi Hydrocyanici ♏ vi.—viij.; Syrupi ʒ j. M. Dosis ʒ ss. ter in die.

In hypertrophy of the ventricles of the heart with astonishing benefit. The quantity of the hydriodate ought to be increased every ten or twelve days, when it agrees with the patient. I have known patients fall into flesh during this remedy. I have this day (Dec. 7, 1836) presented a patient to my class at the Hunterian School of Medicine, who has taken the medicine in large doses for the last two years, and whose general health is greatly improved, and he gained flesh while taking it, a fact first mentioned by M. Lugol.

Mistura Odontalgica. (H. of Germ.)

℞ Olei Caryophill. m. viij.; T. Opii ʒj; Ætheris Sulphur ʒ iij. M.

Applied to carious teeth.

Mistura Pectoralis.—*See* Julepum Pectorale—Linctus Pectoralis.

Mistura Quiniæ.

℞ Syrupi ʒ ij.; Misturæ Mucilag. ʒ j.; Quiniæ Sulph. gr. ij.—iv. M.; Detur infanti ʒj ter in die.

Employed in scrofula and when there is general debility. Quinine may be given to children in diluted sherry or porter. *See* Vinum.

Mistura Rhei Comp. (Gregory.)

℞ Aquæ Menth Pip. Oj.; Rhei Pulv. ʒj.; Mag. Cal. ʒ iss.; Zingiberis Pulv. ℈ j. M. Dosis ʒ ss. 3 in die.

This is termed the Mistura Gregorii, and is very much used in dyspepsia and hypochondriasis. I add the following at the dispensary when flatulence is urgent, and the patient neuropathic, complaining of numerous symptoms in almost every part of the body.

℞ Mist. Gregorii ʒ vj.; Tinc. Capsici Sp. Æther Sulph. T. Opii āā ʒj. M.

This mixture is called the Mistura Gregorii C. aliis.

Mistura Salina Ammoniata.

℞ Ammon. Carb. ʒ ss.; Succi Limonis ʒ j.; Aq. Cinnam. ʒ ij.; Aquæ ʒ iij.; Sacchari Puri ʒ j. M. Sumat unciam secunda vel tertia quaque hora.

In the latter stage of continued and typhus fever.

Mistura Salina Ferruginosa.

℞ Mag, Sulph. Sodæ Sulph. āā ʒ v.; Ferri Sulph. gr. ij.; Aquæ Oij. M. Dosis ʒ iv.—viij. bis in die.

Mistura Salina Refrigerans.

℞ Potassæ Carb. ℈ iv.; Succi Limonum ʒ ij.; Potassæ Nitrat. ℈ ij.; Aquæ ʒ iv.; Syrupi ʒj. M. Dosis ʒ ss. secunda hora.

Mistura Terebinthinæ.

See Linctus Terebinthinæ

Mistura Vermifuga.

℞ Filicis Maris ʒ j.; Aquæ ʒ iv.; Coque ad ʒ iij.; cola et adde Sp. Ætheris Sulphur ʒ j.; Syrupi Absinth. ʒ j. M. Exhibeatur ʒ ss. ter in die.

Olea. (Ph. Brittan.)

Pilulæ (Ph. Brittan.)

Pilulæ Acetatis Plumbi.—Pearson.

℞ Plumbi Acet. gr. vj.; Opii gr. j.; Ext. Conii gr. x. M. In pilulas sex divide, bis in die superbibendo haustum ex acido acetico.

See Mistura Astringens, which is

a much softer mode of administering the Acet. Plumbi. Employed in passive hæmorrhages, in colliquative diarrhœa and in dysentery.

PILULÆ ACET. PLUMB. CUM IPECAC.
(H. of GEUM.)

℞ Plumbi Acet., Pulv. Ipecac. āā ʒ ss.; Opii gr. v.: Syrupi q. s. M. In pilulas xl. divide sumatur una secunda hora.

In uterine hæmorrhage and in hæmoptysis.

PILULÆ ACONITI C. HYDR.

℞ Aconiti Ext. ℈j.; Hydr. Oxymur. gr. ij.; Pulv Acaciæ ℈j.; Conf. Rosæ q. s. M. Ut fiant pil.xx. j. m. n.

In obstinate cutaneous diseases, complicated with venereal complaints, and scrofula.

PILULÆ ALOES C.

℞ Pil. Aloes Comp. (Ph. Lond.) ʒj.; Ferri Sulphatis ℈j.; Pil. Hydr gr. vj.—x.; Ol Menth. Pip. m. v. Fiat massa et in pilulas granorum iv. dividenda, j. m. n.

An efficacious aperient and tonic in dyspepsia, chlorosis, anemia, &c.

PILULA ANTIMONII C. OPIO.

℞ Antim. Tart. gr. vj.; Opii gr. xij. Divide in pilulas xxiv. j. h. s. o. n.

ALTER.

℞ Hydr. Subm. gr. ij.; Opii gr. j.; Antim. Tart. gr. ij.; Fiat pilula.

In secondary syphilis and chronic diseases for which alteratives or salivation is necessary.

PILULÆ CATHARTICÆ C.

℞ Ext. Colocynth. C. ʒj.; Hydr. Subm. gr. x.—xij.; Olei Menth. Pip. m. v.; Ext. Hyoscyami ℈j.; In pilulas xv.—xviij.—j. m. n.

This is a safe and efficacious purgative, is much employed in costiveness, more especially during pregnancy. When there is great nervousness, a grain of strychnine may be added. Care must be taken not to allow the submur. to accumulate in the system, least salivation be induced.

(To be continued.)

APOTHECARIES' HALL.

It is painful to advert to the circumstances which took place at the late Examination at Apothecaries' Hall. However anxious we may be at all times to support the weaker cause, yet we cannot, in this instance, presume to defend an act which, on the very face of it, would subvert the law of the land. But we cannot avoid taking the present opportunity of impressing on the minds of the functionaries of our public medical institutions, that all such evils as that which lately happened at Apothecaries' Hall would be altogether avoided by the examination being MADE PUBLIC. The publicity of an examination, whilst it would afford an undoubted protection to the student against improper and irrelevant questions, would equally protect the examinator from imminent insult and personal abuse.

BOOKS RECEIVED FOR REVIEW.

The British and Foreign Medical Review, or Quarterly Journal of Practical Medicine and Surgery. Edited by J. FORBES, M. D., and J. CONOLLY, M. D. No. V. Jan. 1837.

The Cyclopædia of Anatomy and Physiology. Edited by R. B. TODD, M. D. Part IX. Jan. 1837. Sherwood & Co.

The Medico-Chirurgical Review and Journal of Practical Medicine. Edited by JAMES JOHNSON, M. D., and H. J. JOHNSON, Esq. Jan. 1837.

Sketch of the Comparative Anatomy of the Nervous System; with remarks on its developement in the Human Embryo, with Plates: to which is added an arranged description list of the *Series of Illustrative Preparations and Drawings,* and an *Anatomical Table of the Analogies between the Brain of the Human Fœtus and that of the Lower Animals.* By JOHN ANDERSON, M. E. S., 4-to., p. 63; 3 Plates, 43 Figures, London, 1837. Sherwood & Co.

By the same Author.

An Essay on Renal Dropsy; illustrated by Cases and a Dissection. To which is subjoined a Table, shewing the state of Urine in various Diseases, principally with regard to its Coagulability by Heat and Acid; taken from fifty patients promiscuously, London, 1837, p. 12. Sherwood & Co.

A Clinical Treatise on the Endemic Fevers of the West Indies, intended as a Guide for the Young Practitioners of this country. By W. EVANS, M.R.C.S., 8vo, p. 309, London, 1837, J. Churchill.

MANCHESTER ROYAL INFIRMARY

London Medical and Surgical Journal.

No. XXI. SATURDAY, JANUARY 21. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. VI.

Flow of Arterial Blood.

Peculiarities of the Heart and Arteries in Birds, and in Seals, Otters, and other Diving Animals.—Singular Arrangement of the Arteries in the Brain of the Ruminantia, and the Extremities of the Sloth.—Difference of Tissue in the two sides of the Heart.—The Pulmonary Artery really a Vein, like the Vena Porta; and the Pulmonary Veins really Arteries.—Real Extent of the Arterial Tissue. The Arterial Tunics.—Instances of Arteries without any Tunics.—Elasticity of the Arteries.—Effects of Age.—Arterial and Venous Plethora.—Real Composition of the Middle Coat of Arteries.—Fœtal Circulation.—Cause of the large size of the Fœtal Liver.—Weight of the Heart.—Cases where it inclines to the Right Side.—Reason why its two sides having no direct communication, are placed together.—Resemblance of the Heart and Brain to those Fishes, Reptiles, and Birds.—The Heart at first Single.—True Theory of Monsters.—No Lusus Naturæ.—Cases of Absence of the Heart.—The Bone of the Heart.—Arrangement and Action of the Muscular Fibres of the Ventricles.—Their Muscularity formerly denied.—Different Shape of Different Sections.—Opinions of Meckel and Duncan.—Continuance of Irritability after Death.—Collective Area of the Capillary Arteries. Different Estimates, from a third, to forty-four thousand.—Cause of Night-Mare, and Unpleasant Dreams.—Rapidity of the Circulation through the Lungs.—Different Course of the Pure and Impure Blood in the Fœtus.—True Explanation of Morbus Cerulæus.—Real use of the Ductus Arteriosus.—Manner in which the Foramen Ovale really becomes closed after Birth.—Form and Mechanism of the Mitral Valve.—Effect of the Obliquity of the Heart's Fibres.—The Contraction of the Aorta at its mouth, does not diminish the Stream.—Explained on the principles of Hydraulics.—Remarkable case of Voluntary Power over the Heart, so as to feign Death.—The Cause Explained.—Reason why the Circulation and Respiration are Independent of the Will. Mutual Dependence of the Heart and Lungs.—Origin of the terms systole and Diastole.—Force of the Heart's Contractions.—Different Estimates from one, to three hundred and sixty thousand.—Different Theories on the Beat of the Heart.—Straightening of the Arch of the Aorta not during the Systole.—Active Dilatation of the Ventriculus.—The Beat of the Heart, and the Pulse at the Wrist, not Synchronous.—Reason why they appear nearly so.—Examination of the Different Theories on the Sounds of the Heart.—Rythm of the Heart.—Quantity of Blood in the Body differently estimated at from Eight to a Hundred Pounds.—Time it takes to pass through the Heart, differently stated at from Three Minutes to a Hundred Hours.—The Pulse quicker in the Evening.—Pulse in Infancy and in Old Age.—Disputes as to the Pulse in the Fœtus.—Probable Solution of the Difficulty.—Rate of the Pulse in Brutes.—Proportion of Blood in the Arterial System.—Elasticity of the Arterial System.—Elasticity of Arteries.—Investigation of the Muscularity of Arteries.—Arguments brought forward and refuted from the Continuity of Arteries with the Heart; from their Contracting on the Application of Stimuli; from the Effects of Puncturing them between two Ligatures; from their Contracting on Exposure; from the Action of the Aortic Valves; from their being Easily Injected immediately after Death; from more Rapid Pulsations in some parts of the Body than in others; from their being subject to Paralysis; from the Power being injured by Ossification; from their carrying on the Circulation when the Heart is Diseased or Wanting; from the Analogy of the Inferior

Animals; and from Monsters.—The Capillaries avowedly Muscular.—Physiology of Blushing.

In birds the heart is larger in proportion to the body, than in any other animal. Sometimes it is equal to one forty-ninth part of the whole body. The auricles are fleshy, as well as the ventricles. The arteries of birds have very thick coats; and their fibrous structure is very distinct. It is in birds that the two kinds of blood are first well distinguished. In the dugong, the two ventricles of the heart are scarcely connected with each other.

The mammalia have hearts very much resembling those of birds. In the seal, the otter, and other diving animals, the Eustachian valves are very nautia, are subdivided before they enter it; and those which go to the extremities of the sloth, have the same arrangement. The design of this seems to be to cause a retardation in the flow of blood; for the the collective calibre of these ramifications, is greater than that of the main trunk from which they spring.

I think it better to describe the heart by the two kinds of tissue to which its two sides belong; the *right* side to the *systeme du sang noir* (as Bichat called it); and the *left* to the *systeme du sang rouge*. The pulmonary *artery*, if judged by its tissue, is a *vein;* and judged by the same rule, the pulmonary *veins* are *arteries*. Indeed they were so denominated up to the time of Harvey: but he took as a distinction only, the *course* of the blood, and not its *character*. If the pulmonary artery be called an artery, the *vena porta* should be called an artery too. I think Bichat was right in saying that the arterial tissue extends from the radicles of the pulmonary veins, to be capillary extremities of the arteries, including the left side of the heart.

An artery has three coats; the *internal* of which is smooth, and not fibrous; while the *external* coat *is* fibrous, and is common to other viscera; so that it does not belong to the *arterial tissue*, though it does to the *artery*. In the Sturgeon *all* the coats are sometimes dispensed with; the blood flowing in canals, or excavations in the bones; and in other fishes the artery passes through the vertebræ, like the spinal marrow. The arteries have great elasticity, especially in the transverse directions. As age advances, they become more rigid, while the veins are rendered less so. Hence we have an *arterial* plethora in youth, and a *venous* plethora in age; for the blood collects in the vessels which oppose least resistance. Berzelius and Young deny the existence of fibrin in the middle coat of arteries. This coat probably consists of the *tissu jaune*, or *tela elastica*, described by Hoff, in the year 1822.

In the fœtus, only one-fifth part of the purified blood goes directly to the heart, through the medium of the *ductus venosus*. The rest goes to the liver; and to this arrangement is owing the large size of that viscus, at the period in question. In birds, if the heart inclines at all, it is to the *right* side. In the human subject, the heart weighs about ten ounces. There is no connection between its two sides, except by a circuitous route through the body, or through the lungs. Had the two sides of the heart been placed on different sides of the body, they would have carried on their appropriate functions; but by being united they gain strength, though their motions are the same.

It is asserted, and apparently with justice, that the human heart, during its formation, passes through various grades; from that of a fish (and probably still lower); through reptiles, up to birds and the mammalia. With respect to the brain, this fact is proved. It passes through the forms possessed by the different grades of the mammalia; *glires*, *pecora*, *feræ*, and the apes. As the heart and brain advance from simplicity to multiplicity, as we proceed in the animal scale, so the arteries, nerves, &c. advance from multiplicity to simplicity. The heart of the dog, on the twenty-first day, is like that of a fish; and during its progress resembles that of a reptile, a bird, &c. The human heart is at first single; there being a communication between the ventricles till the eighth week. It does not incline to the left side till the ninth week. The occurrence of monsters is explained by an arrest taking place at some period of this progress of organization; but this does not explain *why* an arrest should occur. This view of the subject proves that *lusus naturæ*, as applied to monsters, is an improper term for there is order even in this apparent disorder. The heart is observed before spinal marrow, or the brain; so that the circulating and the nervous systems are independent of each other. Cases are related by many authors, in which children were born without a heart at all proving that the circulation may go on without it. Tiedemann has made a collection of these cases.

The *musculi pectinati*, and *columnæ carneæ*, are not attached to the lining membrane of the heart; but are invested by it. Aristotle, Galen, and others, talk of "the *bone* of the heart." They judged by analogy from the heart of an ox; which (as well as that of a stag and of a pig) has a bone in the valves of the aorta. Even in man the *corpora aurantii* sometimes become ossified.

The ventricles, if boiled a long while, are said to present three layers of fibres; the two external of which are oblique; and the internal one longitudinal (according to some authors), or transverse, according to others. The fibres which reach the apex, turn in, to form the *columnæ carneæ;* so that the latter are the fulcra of these fibres. Those fibres which do *not* reach the apex of the heart, are turned up to form the *septum ventriculorum*, and the parieties of the right ventricle. The two external layers decussate, like the intercostal muscles. When all the fibres act together, as when the auriculo-ventricular valves are raised, and the heart is full, the apex of the heart is pulled up towards the base. But when the heart is empty, and the valves are not raised, the long fibres which go to the apex and *columnæ carneæ*, have no *point d'appui;* the septum and the ventricle are thus left to act alone; and the contraction of their fibres tilts up the apex of the heart. To this tilting up of apex, which cannot take place if the heart be full, the beat of the heart has been improperly ascribed. The course of the fibres, as we have described it, accounts for a section of the *left* ventricle being circular; and for one of the *right* being united.

Celsus affirmed that the heart was muscular; Galen denied it. Harvey was the first who proved it, and he did so by every argument of which the subject is susceptible. Duncan's researches on the course of the fibres agree in general with those of Meckel, except that Duncan considered internal fibres to be the transverse, and that some are confined to the left ventricle, while others extend to the right. In some respects the muscles of the heart present an analogy to those of the abdomen. The irritability of the left auricle in man, generally ceases in half an hour after death, while the right auricle often retains its irritability for nine hours after death.

The collective area of the capillaries has been variously stated. Senac says it is only one third more than the calibre of the aorta; Helvetius says that it is five hundred times, and Keil four thousand times. Helvetius is most likely to be correct, and according to his view, the blood must move five hundred times slower in the capilaries, than in the aorta. The erect position is unfavourable to the flow of blood in *vena cava inferior*, and a supine position is favourable; but it is the contrary of the pulmonary veins, because they have to convey more blood from behind than from before. Hence, lying on the back is disagreeable, because the blood is retained in the posterior part of the lungs, and gives rise to irritation, and this often produces night-mare, and unpleasant dreams. In all affections of the chest, we are obliged to have the shoulders raised, and if the dyspnœa becomes more severe, we are forced to lean forward. The circulation through the lungs is more rapid than in any other part of the body. The blood probably passes through the pulmonary veins three times more quickly than through the *vena cava*. As they are smaller than the pulmonary *arteries*, the circulation through them must be proportionally quieter. In the fœtus, it passes chiefly from the right auricle into the left, through the *foramen ovale*. It is then sent into the left ventricle, and is thence propelled to the upper parts of the body. The impure blood is forced from the right auricle into the right ventricle, and thence, through the pulmonary artery, and *ductus arteriosus*, into the descending aorta. The two last-mentioned vessels, are nearly of a size in the fœtal state. As the left auricle receives no blood from the pulmonary veins, when the auricles dilate it presents an open cavity, but in the case of an adult afflicted with *morbus cæruleus*, in which the *foramen ovale* remains open, it is not during the *dilatation*, but during the *contraction* of the auricles, that the blood passes from the right into the left. The mere circumstance of the *foramen ovale* being pervious, is not sufficient to cause *morbus cæruleus*, for there is no greater tendency for the blood to pass out of one auricle than out of the other; but if there be, at the same time, any obstruction in the *lungs*, then *morbus cæruleus* occurs. Bichat filled one auricle with ink, and the other with water, and made a free communication between them, but no mixture of their contents took place. If the blood of the two auricles be the same, of what use is the *ductus arteriosus*, since the same object might be accomplished with a large *foramen*

ovale? If that arrangement had been adopted, the right ventricle would have had nothing to do, and therefore at birth would probably not have been sufficiently developed. We should likewise not have had the force of the right ventricle, to assist in propelling the blood to the placenta.

The tubercle Lower directs the current of one *vena cava* away from that of the other; and the horns of the Eustachian valve are adapted to guide the blood of the lower *cava* into the left auricle. The current of the lower *cava* has also greater force. The tides do not *cross*, for the one is posterior to the other. It is in favour of this view that the irritability of the left ventricle is found at birth, to be fitted to the stimulus of *purified* blood, while the irritability of the right ventricle is fitted to the stimulus of *impure* blood. It is not likely that this difference was established in a moment; but no doubt it had existed long before birth. The same thing is known to occur in reptiles, which are so analogous, in many respects, to the human fœtus. It is well seen in the tortoise and the crocodile; in the latter of which there are divisions in the ventricle to separate the two currents of blood. The heart of the fœtus is single; but has a double function.

The reason why the current of blood in the inferior *vena cava* is stronger than that of the superior is, that the *vis à tergo* is stronger, and that the fœtal head is downward. During fœtal life, the determination of blood is from the right auricle to the left; but after birth, the left auricle first gets more blood than the right; because the latter has lost its supply from the placenta, and thus the determination is from left to right. By this means the Eustachian valve is pressed close, and by a process resembling inflammation, becomes adherent.

During inspiration there is probably a little regurgitation into the pulmonary veins, and during expiration into the *venæ cavæ*. The mitral valve resembles a sail, bagged by the wind. This valve, by means of the *columnæ carneæ*, must have the power of exercising more force when more is required. By the obliquity of the heart's fibres, their *extent* of motion is increased, but their *force* is diminished.

At the mouth of the aorta there is a contraction at the point at which the valve is situated. When water flows from a cistern, the stream becomes contracted at a little distance from the aperture, so that a conical aperture transmits as much fluid as if the aperture were throughout of the same size as the base of the cone. Hence the valve and the contraction at the mouth of the aorta do not diminish the stream of blood.

The heart is generally independent of the brain; but it may be much influenced by it; and less by the *abstraction* of the brain altogether, than by its perturbation. Some cases have been related in which a voluntary power seemed to be acquired over the heart, as in the case of Townsend, related by Dr. Cheyne. The heart and the pulse ceased to beat, and the respiration to go on. This continued for half an hour, and they thought death had actually taken place. He recovered, however, for that time, but died the same evening. I do not think that, in this case, the heart was a voluntary muscle, but that the man had acquired a power of exciting the passions to the extent of producing a kind of temporary apoplexy. It is well that the circulation and respiration are independent of the will; or we should have no repose day or night from the necessity of watching to keep those functions going.

The heart and the lungs are mutually dependent on each other; but the former is much less dependent on the latter than the lungs are on the heart. If we stop or double the pulsations of the heart, we stop or double the respirations of the lungs; but if we stop or double the latter, the former are not so much affected. The terms "*systole*" and "*diastole*" were first used by Galen; who, though he denied the muscularity of the heart, talked of force. Borelli thought that the heart, in its systole, acted with a force of a hundred and eighty thousand pounds; while Kiel rated the force at only half a pound. Between these two extremes there have been calculations of all kinds. Borelli and Kiel were both distinguished mathematicians; but their estimates are to each other as *three hundred and sixty thousand to one!*

The beat of the heart has been thought to take place during its systole; first, from the filling of the auricles; secondly, from the straightening of the arch of the aorta; or, thirdly, from the tilting up of the apex of the heart. The first conclusion was arrived at from seeing the ventricles tilted up, when the auricles were suddenly filled with air; but this is very different from the equable flow of blood. Besides, the

heart always contains the same quantity of blood, either in the auricles or the ventricles, or divided between both. The second is probably the cause, *in part;* but the straightening of the arch of the aorta must take place during the *diastole,* for the ventricle must already have emptied itself. As to the third, the apex of the heart tilts up when the ventricle is *empty,* but not when it is *full;* for in the latter case, the *carneæ columnæ* are not put on the stretch, so as to furnish a *point d'appui,* and the apex tilts up as before explained. Vesalius, and others, thought the apex of the heart was actually *elongated* during the systole; but the course of its fibres renders this impossible; and if it could take place, the valves would be opened instead of closed, and the *carneæ columnæ* would aggravate the mischief. From the experiments of Stokes and Corrigan it is almost certain, that the beat of the heart takes place during the *diastole* of the ventricles; probably from the straightening of the arch of the aorta partly, but also, in a great measure, from the *active dilation* of the ventricles. If you take a bullock's heart which has been recently removed from the animal, all the force you can exert will not prevent the dilatation of the ventricles. This mechanism is best observed in the heart of a frog; for, owing to the transparency, you can see that the beat takes place while the ventricle is being refilled. The pulse at the wrist is not synchronous with the beat of the heart; but they appear to be more nearly so than they really are; for as the impulse has come through the chest, some time is lost before it is felt.

The acute sound of the heart is attributed by Williams to the falling back of the valves, and by Turner, to the falling back of the heart itself upon the pericardium, but it is more probable that this *sharp* sound is from the contraction of the ventricles, and the *dull* sound from the flow of blood into them.

With respect to the rythm of the heart, Laennec says one half the time is occupied by the contraction of the ventricles, a quarter by that of the auricles, and then a quarter is left for the internal. According to this theory, so far from the heart never resting, the ventricles (which act most), act less than many of the voluntary muscles of the body; those for instance, which hold up the head. But according to more recent views, the auricles take up *half* the time in contracting, instead of a quarter, their *contraction* being of course simultaneous with the *dilatation* of the ventricles.

It is generally estimated, that the blood in the body amounts to thirty pounds, and that it all passes through the heart once in three minutes. But neither of these points is settled. The quantity has been stated at only eight pounds. Kiel, again, says it is a hundred pounds; thirty is Haller's estimate. He takes it at one-fifth of the weight of the whole body, which (taking the average between male and female) is about a hundred and fifty pounds. Harvey thought all the blood in the body passed through the heart, only once in a hundred hours. Others have even stated it once in a hundred hours, while others, again, have estimated the time at less than a minute. All the blood may be drained from the body, in a short space of time, from one divided artery, and in order to this it must all have passed through the heart.

The pulsations of the heart are quicker in all those cases in which the expirations preponderate over the inspirations. The blood is both a stimulous and a load, and *inspirations* predominate, the stimulus is the same, while the load is greater, so that the heart does not beat so freely. Cullen and others say, that the pulse is quicker in the evening; but Sanders and others say, that it is quicker after breakfast. In my own person, I find the pulse is generally faster in the evening by two beats. The pulse of the infant, for some days after birth, cannot be reckoned; but when first capable of being counted, it is about a hundred and forty. In old age, it falls to about sixty. The frequency of the pulse in the fœtus, is disputed. As ascertained by the stethoscope, it is said to amount to a hundred and sixty, or a hundred and seventy. It is questionable whether any analogy on this subject can be drawn between the infant *after* birth and *before* it, for in the latter the heart is single, and beside, it differs in sensibility in the two periods, owing to the difference of the blood supplied to it in the two cases. Probably, when the stethoscope is employed, the sounds both of the ventricles and the auricles are counted. for whenever the pulse in the umbilical cord has been counted, it has been found to be that of the adult at the ordinary standard, even in cases where the pulse of the mother, at the same time, was at a hundred and twenty. The pulse of the fœtus is probably the same as that of the mother. The rapidity of the pulse, in

other animals, is generally in the inverse ratio of their size, for it is only forty-five in the horse, while in a small bird it is a hundred.

There are about five pounds and three quarters of blood in the aortal system; and about two ounces are added at every systole of the left ventricle. This additional quantity does not at once displace the whole column of blood; for the arteries not being rigid tubes, some lateral dilatation occurs. Some animals have an aortal valve with two pouches; and some fishes have many. The lateral dilatation of the arteries of which we have spoken, decreases as we recede from the heart; because, as the vessels diminish in size, their circumference bears a greater proportion to the area of their contents. Beside, the collective capacity of the arterial system increases as we get farther from the heart; so that a definite quantity of additional blood, would make less impression there than nearer the heart.

If we deny that the arteries are muscular, and only allow them to be elastic, we must not speak of "the power of the heart *and arteries*"; for the latter, if elastic only, can give no power which they do not receive. They can only propagate the power of the heart. A Dublin professor says that an artery, if tasted after being cooked, will not be found like a muscle. Muscular fibres in other parts of the body, are generally cylindrical, soft, inelastic, and red; but the fibres-arteries are flat, hard or tough, elastic, and yellow. It is said arteries must be muscular, because they are continuous with the heart; but they are really continuous with the tendinous ring of the left ventricle. Beside, a tendon is continuous with a muscle; but that does not prove it to be muscular.

It has been said that the fibres of arteries contract on the application of various stimuli. Hunter and Mayo say they contract on mere exposure; but that may be owing to condensation caused by cold. Magendie and others affirm that *large* arteries do *not* contract. The capillaries are *proved* to be muscular. It is true that if a portion of an artery be included between two ligatures, and then punctured, the contained fluid is expelled; but this may be from the elasticity of its tissue, owing to its being in a state of distention. Muscularity is said to be necessary to insure the action of the aortic valves; but if so, the *pulmonary* artery should be muscular, though its structure is very different from that of the aortal system. Elasticity would be sufficient to secure the action of the valves. It has likewise been urged that the arteries are more easily injected soon after death, than a few days subsequently; but this is probably owing to their elasticity remaining till decomposition begins. If the arteries were muscular, they ought to be found relaxed, like other muscles, immediately after death.

Duncan denies what has often been adduced as an argument in favour of the muscularity of the arteries,—that there is not one good case on record, of the blood reaching different parts of the body, with different degrees of rapidity. It does not reach them in the same time; but it does in the same proportion of time; though its course may present many varieties in other respects. When the arteries of a finger upon which a whitlow is situated, appear to beat more violently than the rest, it is probably owing to the obstruction in their course through the inflamed part. Not that they act with greater force, but that they have to contend with greater resistance, which acts in the same way as a stone in a rivulet. In blushing, there is not more blood sent to the cheeks; but there is a difficulty in its transmission from the capillary arteries to the veins. The phrase "*determination* of blood," should be abolished; unless we understand it to mean "*retention* of blood."

Arteries, it has been said, are subject to paralysis; for they are weaker in a palsied limb. This, however, is not a constant effect; for their pulsation is sometimes *stronger* in such cases. But even if it were, it must be owing to some other cause; for paralysis affects only *voluntary* muscles; while, if the arteries are muscular at all, they must be supplied with *ganglionic* nerves. Another argument which has been brought forward is, that if an artery be ossified, though its calibre be not diminished, the organ supplied by it diminishes in size. But this may arise from a diminished quantity of blood going to the organ, in consequence of the dilatability of the artery being prevented, and not in consequence of any defect in propelling it. Some instances have occurred, in which all the arteries were ossified; and yet the circulation went on. Again, it has been said that the heart may be diseased without stopping the circulation; that some animals have only an aorta; and that some fœtuses are born without a heart. But when one part is wanting, another often

supplies its place; and if the heart becomes unfit for its office, muscular fibres may be deposited in the arteries, as they are in the uterus during pregnancy. Fallopius and others relate cases in which the aorta was completety ossified; and others give cases of complete ossification of the arteries. But the analogy drawn from fish and other animals, in which the heart is not systemic, and in which therefore the pulse, if there be any at all, must be caused by the arteries, is quite untenable. We conclude that the arteries in these animals are muscular, because they have *no* heart. But man *has* a heart; and therefore he ought *not* to have muscular arteries. For if the arteries had been sufficient to carry on his circulation, we must conclude he would not have had a heart, any more than worms, and other animals similarly situated. In the case of all fœtuses born without a heart, Lawrence says there was always another fœtus with a heart, which supplied both. But even if it were not so, a monstrosity would not furnish a valid argument, any more than disease. If Nature made a being *deficient* in *one* part, she could make him *redundant* in *another* part; so that the muscularity of the arteries may be as much a monstrosity, as the want of a heart!

A SUCCINCT TREATISE

ON

MEDICAL REFORM FOR IRELAND.

(Continued from page 612.)

Having thus adverted generally to this mischievous anomaly, I shall proceed *seriatim* with each of the three years in question. And first with respect to 1830, it may be seen in the 3d part of my Pathology * then published, that besides adverting previously to the decisive evidence in favour of the blood I had advocated; of Mr. Searle in the East, in his publication on epidemic cholera, and that of Dr. Steevens in the West Indies, in his observations on cholera and typhus, I also stated "that there was then another form of the pestilence, namely, *Cholera Morbus*, which was more fatal than the rest."

The following are abridgements from that publication of two cases in which the intellects were perfect, and both by their symptoms and *post mortem* appearances, tended to prove a direct connection then and since between asphyxia, coldness, blueness of the skin, sudden death, and morbid changes in the condition of the blood. In both cases, it may be perceived that the epidemic supervened on other diseases, which predisposed to the attack.

John Martin, a butcher, aged 42, was admitted 24th January, 1830, having laboured for eight days under symptoms of Pneumonia, which had been relieved by copious bleedings, leeches, blisters, &c. The blood first drawn, I learned was neither firmly coagulated, nor much buffed, but that the last was pitch-coloured and clotted. At the time of his admission no pulse could be felt even in the Iliac and Carotid arteries, and but an indistinct fluttering at the heart itself. The skin was icy cold, moist, and livid: and the extremities, nose, lips and tongue were quite purple, as were also those parts to which blisters had been applied. He walked up stairs without help, and his mental faculties were complete to the last moment. Upon stethosopising his thorax, that peculiar *bruit de souflet* which, in the cases of horses in 1821, already referred to, indicated hepitization of the lungs, was distinctly audible. Warmth and cordials were vigorously employed, but general spasms set in, and death followed in twelve hours from admission. On inspecting the body next day, it was generally purple, as was usual at that time, not only in Cork-street, but in the Edinburgh hospitals, according to Drs. Allison and Graham's lectures, which I at that time quoted in support of my Pathology of the prevailing epidemic.

Second case. — Mr. T. W., aged 20. This gentleman had long laboured under caries of the dorsal vertebræ, together with pectoral affections, which had become very urgent in February 1830, accompanied with hœmorrhagic fever and dropsy. He came to town for medical advice, and by the antiphlogistic regimen and small bleedings was relieved, the blood being buffed, and for some days his strength and appetite continued to improve. Unfortunately, however, he was indulged, unknown to me, by his

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* Pathological Observations, part 3d, 1830. By William Stoker, M.D. page 11 and 101. At the 109th page the above case of Martin is fully detailed under the head of "Pneumonia Typhoidea.

attendants, with too much food, and the affection of the chest became suddenly alarming. Bleeding and blistering were again resorted to, but not with so good an effect as at first. The blood drawn became a dark-coloured clot, the lips, tongue, and extremities, purple; the countenance livid; the voice failed; the pulse became suddenly feeble, and entirely ceased six hours before death, which took place a fortnight after his arrival in Dublin, and about twelve hours after his arrival in Dublin, and about twelve hours after his relapse.* On dissection the face, neck, and chest were of a livid hue, the tongue, lips, and interior of the mouth quite purple; hypertrophy of the heart, without disease of the valves; the large vessels were filled with dark blood; numerous tubercles in the upper portion of the right lung; the whole of the left lung was emphysematous, and adherent at its inferior margin by a fistulous communication with the 7th and 8th dorsal vertebræ, both of which were in a state of caries. The abdominal viscera were sound, except the pancreas, which was enlarged and tuberculated.

In addition to these specimens of the epidemic of 1830, I can also refer for a more complete description of it to the 3d part of my Pathological Observations, and to Dr. Grattan's Report of the Fever Hospital and House of Recovery, Cork-street, both published that year. In the former of those publications I recommended the root of dandelion, prepared as coffee, both as a preventive, and a remedy in the severe forms of cholera morbus, and in obstinate diarrhœa, which then presented themselves in hospital and private practice, and also preparations of achillœa milefolium or milfoil in those hydropic and rheumatic affections with which they frequently alternated. Very extensive trial of these vegetable substances, both as substitutes for more costly, and sometimes less safe articles of the *Materia Medica*, as well as favourable reports subsequently by some of my medical brethren, led to my first recommendation of them. I repeated it from finding them well suited for preventing and curing diseases more general amongst the Irish poor than those of other countries, (e. g.) epidemic cholera, and diarrhœa, and also for other diseases, which I observed frequently to alternate, since they have become more pestilential; I mean dropsy, spurious phthisis, and rheumatic pemphigus. This peculiarity of the disease of the poor of Ireland (as will appear more manifest under the subject of statistics) arises, I believe, chiefly from scarcity and insufficiency of food, particularly from the unwholesomeness of the potato, the staple food of the peasantry, when that article, which annually happens, is in a state either of decay or immaturity. An antidote, therefore, to such a national calamity, which might, at the same time be an agreeable substitute for ardent spirits, itself, a very general exciting cause of such diseases, must be deemed a *desideratum* of great moment in medical as well as in political economy. In Dr. Grattan's report of 1830, it is stated that it appears to him that the forms of epidemic which then presented themselves "passed by such imperceptible gradations into each other, as to be considered but varieties of the same disease." *

For a fuller description of the epidemic of 1831 than would be compatible with the space that remains, I must refer to the medical report from the Cork-street fever hospital for that year, and to my Comparative View of Cholera Morbus, published at the close of it. In the former of these publications, the epidemic of 1831 is thus described: "Its characteristic symptoms are, great depression of spirits, irregular, small, and sometimes intermitting pulse, *tongue seldom dry*, but loaded with a viscid mucus, bowels torpid, *alvine evacuations, abounding with diseased fætid mucus, and deficient in bile, brain seldom engaged.*" † The following specimens are extracted from my Comparative View. (See Appendix Note B.

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* It has been objected by those opposed to the investigation I sought that such cases as those in the text are not those of *Cholera Morbus*. But I never said they were; I am now sure, however, comparing them with the cases which those objectors have published as examples of the malignant epidemic of 1832, 3, 4, that those of 1830 were essentially the same.

† Pathological Observations, part 3, on inflammatory, typhoid, and symptomatic diseases, &c. Dublin, 1830.

* Report of the Cork-street Hospital for 1830. By R. Grattan, M. D.

† See Medical Report of the Fever Hospital and House of Recovery, Cork-street. By P. Harkan, M. D.

December 8th, 1831. Deborah Deane, ill six days of severe cholera, which commenced with painful and violent spasms, in the trunk and lower extremities, with vomiting and purging of turbid serous gruel-like fluid, and attended with extreme debility. The surface everywhere cold, features shrunk. Her symptoms were quickly subdued, chiefly by a mixture with compound spirit of ammonia and camphor, and on the 9th December, she was convalescent.

December 13th, 1831.—Charles Kelly, aged 70, ill seven days of cholera, which commenced with violent pains in his stomach, and spasms in his legs, accompanied with vomiting and purging of gruel-like fluid, and extreme prostration of strength; his face and hands shrunk and blue; skin cold and clammy; no pulse at the wrist; voice scarcely articulate; lower extremities dark blue; spasms and a painful sense of stricture over the belly and chest. By the aid of frictions, warmth, and camphorated mixtures with ammonea, which were remarkably successful in this case in producing reaction within its proper bounds, he was considerably improved. On the next day, inflammation of the lungs set in, which required bleeding, and the blood was slightly buffed, an event which often takes place after crisis in fever, though it had not previously. His recovery from this time was progressive, and he was dismissed from the convalescent wards a few days afterwards.* It was chiefly with a view to such case as this that I was led to recommend a more steady admission to the hospital than in ordinary times, and no part of the cholera regulations, afterwards published at the suggestion of Drs. Russell and Barry, appears to me more likely to save life than those which enjoined ready admission of those who sought it, and the conveyance of patients in an horizontal posture. As may be seen I urgently recommended such regulations, in the report of 1823.

The next table, taken from the journals I kept during my bimestral attendance, ending 4th February, 1832, includes those two months which I first witnessed sporadic cases of epidemic cholera, approaching, on the one hand, to the distemper of 1823, and on the other, to the aggravated form it afterwards assumed in 1832, 33, and 34:—

No in Cholera.		*Died.*	
Male.	Female.	M.	F.
13	25	6	12

Delirium tremens.		*Died.*	
Male.	Female.	M.	F.
3	2	1	1

Typhus and Synochia.		*Died.*	
Male.	Female	M.	F.
14	25	1	1

Phthisis.		*Died.*	
Male.	Female.	M.	F.
3	23	1	9

Inflammatory Fever		*Died.*	
Male.	Female.	M.	F.
10	54	0	0

Rheumatism.		*Died.*	
Male.	Female.	M.	F.
10	54	1	0

Scarlatina.	
Male.	Female.
2	5

Small Pox, after Vaccination.	
Male.	Female.
1	4

Besides those cases enumerated in the foregoing table, there were some nondescript or simulated, making the whole number who passed under my care during those two months, 60 males, and 204 females, of whom 8 males and 16 females remained, some convalescent and others still labouring under acute or chronic complaints, one only, of the latter, a female had symptoms of cholera. The average mortality was 1 to $10\frac{5}{8}$. And it may be observed here that this as well as the general mortality in the hospital at that time, far exceeded that of the total at the close of 1830, which was scarcely 1 in 18. This difference itself indicated clearly an unusual severity of the epidemic; but the following report of some of the fatal cases in those two months, further shows what that epidemic truly was:—

December 3rd, 1831.—Anne Keogh, aged 20, some time in the hospital, states, that her illness commenced seven weeks before with purging and vomiting, cramps in her bowels and calves of her legs. Although now somewhat relieved by chalk mixture, prescribed on her admission, yet is still distressed by diarrhœa: alvine evacuations, frequent and thin, like rice gruel, skin cold, voice and

* See my Comparative View of Cholera Morbus, Published January 30, 1832.

pulse feeble, countenance shrunk. Under the use of various remedies, this patient continued for several days alternately better and worse, but at length was sent to the convalescent wards. There, in a few days she suddenly relapsed and died five hours afterwards, in the most malignant form of cholera morbus. The body and extremities having become purple some time before death.*

January 1st, 1832.—Brian Brady, aged 80, had been attacked six days before with vomiting, purging, and cramps in the belly and legs; on the 22nd December he was admitted, and gradually recovered. But on the 7th January in the course of the morning he suddenly relapsed, with purging and vomiting of gruel-like fluid, symptoms which ceased in the afternoon. The skin was at that time cold, moist and blue, his breath was cold, eyes hollow, and features contracted; no pulse perceptible; spasmodic pains in his belly and legs; no urine passed for eight hours, nor was there apparently any secreted, as the bladder was empty. No interruption of the mental faculties. Notwithstanding the employment of cordials, friction and warmth, he died at six o'clock the same evening, about seven hours from the commencement of his last attack. On the succeeding day the body was rather less purple, and had the appearance of being dead some days, as happened in some cases. This, too, as is well known, was constantly observed in fatal cases of cholera, after that disease had been officially announced in Dublin.†

January 7th, 1832.—Patrick Dargan, an habitual drunkard, was admitted. He had laboured for seven days under cramps in his belly and legs, attended with great prostration of strength. At the time of admission, however, these symptoms had abated, and he was principally affected with stricture and pain of his chest, especially in the region of the heart. His appetite was keen, pulse full and strong, and skin warm. Under the employment of suitable remedies, particularly venesection and aperients, and a mixture with ammonia he gradually improved; but on the 12th, at 9 A.M. he was suddenly attacked with mucous purging, and at 11 A.M. with pain and spasm through his whole body, with constant writhing of his limbs, skin being cold, shrunk and livid, hands and lower extremities remarkably so, and partially occupied with extensive echymoses. The eyes shortly before prominent, were then hollow, and his countenance pale, collapsed, and anxious; no pulse could be felt at the wrists even after warm drinks and warmth had been employed. These symptoms I have been more particular in stating, as this was one of those cases I wished to be examined before and after death, and compared with those just then reported from England and the Continent; but my colleagues as well as the Boards of Health and the managing committee were opposed to it. My proposition was therefore rejected, and the investigation, with a view to public safety, has been since denied. Although very active treatment was adopted in Dargan's case (as ordered in full consultation), death took place seven hours from the period of the relapse. About half an hour after death, Dr. William Stokes inspected the body along with me, and the remarkable circumstances then to be observed were constriction of the abdominal muscles, livid hue of the skin and echymoses on the elbows and lower extremities. From such appearances, as well as the report of the nurse, and the sudden death, Dr. Stokes expressed his opinion, and afterwards promptly repeated it in a letter to me, that the case resembled, and he would pronounce it malignant cholera, if he had not on other occasions witnessed as great prostration of strength and as sudden dissolution follow perforation of the intestines. He also regretted with me that the regulations adopted by the managing committee of the hospital opposed my urgent request of *post mortem* examination. And to decide the nature of this interesting, important case, I felt to be of vital importance to the public at that time.

Comparing the average mortality in each of the years, from 1831 to 1824, with that which occurred previously, the result is very remarkable, especially in those periods when restriction on the admission of the malignant forms of the pi demic already referred to, were less gi l ly enforced. On the other hand,

* This and five other cases that relapsed in the convalescent ward at the same period are detailed from the 16th to the 22nd page of my Comparative View already adverted to in the text.

† In the manuscript accompanying the report of the months of December, 1831, and January, 1832, six other fatal cases of cholera and fever in a severe form were detailed.

comparing this with statistical tables for the last fifteen years, it appears that the mortality in 1823, 24, 25, 26, and 27, when pestilence raged with characters in many respects resembling those in the last four years, it was very nearly the same. An additional array of facts to illustrate this subject may be seen in the pamphlet I published at the close of 1831, to which I beg particularly to refer. There is also a memorial connected with that pamphlet which I presented in 1835, first to the King and Queen's College of Physicians in Ireland, and subsequently to the Irish government, praying adjudication of the former, and an impartial investigation, of the latter, it aims not less to promote public security, than to obtain that justice which is the birthright of every man.

An abridged case from the medical reports of the years 1832 and 33, and there given as a specimen of cholera epidemic in those years, will assist, I hope, to settle this important, and to me anxious question. Though panic may have lost some of those features which was excited universally at the time I first proposed to reduce it to its just proportions; yet the cause must be still deemed deeply interesting, if the average mortality in hospitals in the past and present year, and the frequency of sudden deaths amongst all grades of society during that period be considered, with a view to the future, as regards either prevention or cure.

Case of Epidemic Cholera, No. 1. *(See Medical Report for* 1832, *p.* 18.*)*

Bridget Kerwan, aged 60.—Seized April 10, 1832, at two o'clock a. m., with severe vomiting and purging. At five o'clock p. m. countenance collapsed and pale generally; eyes sunk, and livid circle round them; cheeks naturally florid, inclining to blue colour; no pulse at the wrist; feeble at the carotid arteries; extremities quite cold and livid; voice nearly extinct; body cold; hands and feet shrunk; the discharge from the stomach dark-coloured and muddy, with a tinge of white; no urine passed for six hours; feet and legs affected with painful spasms. This train of symptoms being seen by the author of the report in question, he announced the case to be epidemic cholera. By friction, dry heat to the extremities, large sinapisms to the centre of the body, both before and behind, and two grains of calomel, and a quarter of a grain of opium, given every half hour, with a spoonful of a stimulant mixture of compound spirit cardamons and aromatic spirit of ammonia, the pulse and voice were restored, the vomiting and purging were checked, and the lividity of countenance disappeared the same evening. The patient was able to sit up in bed on the succeeding morning: she and her friends ridiculed the alarm of its being a case of cholera. The patient, however, relapsed on the next day, and died that night. This case, the most urgent, is given as an index to those denominated cholera in the reports by Drs. O'Brien and O'Reardon, in 1832 and 1833. But the identity in essentials with cases I reported in my comparative view in January, 1832, of those I prescribed for in the New-street cholera hospital, and of those reported from the largest one by the physicians, and in those I saw, September, 1834, in the Tenter House cholera hospital, was unquestionably manifest.

It is to be remembered that the calamitous period of 1798 was one of such occurrences as, in the succeeding years, through famine and the sufferings of the poor, to confirm the foregoing indications of the generating sources of disease.

Having, during a professional course of close inspection for forty years, observed the injurious want of medical statistics, or even of bills of mortality in the Irish metropolis, I lent my aid to the commissioners appointed by government to inquire into this subject, and while I was physician to the Cork-street fever hospital and house of recovery, my annual reports supplied the want as related to that institution. The failure of the Cork-street fever hospital to meet the purposes for which it was calculated, contrary to the ardent expectations of success which I entertained on my first connection with that institution, was owing to the causes which I repeatedly, but in vain, stated to the managing committee and to the members of the Irish government, such means to be wholly beyond the controul of the managers. The true cause was the utter destitution of the poor, always followed by disease, and notwithstanding the general and very great increase in the population of Ireland, it will appear, by comparing Dr. Whitelaw's census in 1798 (already referred to) with that of 1835, taken by order of government, that the population

of St. Catherine's parish decreased 2,500 souls, and that of St. Luke's 636. This depopulation is proved to have proceeded from the causes I have stated, and I have been supported in my opinions by the medical reports from the rural districts.

There are many fever institutions in Dublin, established since the primitive one of 1803; all were erected with the view of checking the rise and growth of epidemic diseases, but they were multiplied in compliance with an opinion, (I think fallacious) that such diseases depend chiefly or wholly on contagion. They appear to me, therefore, to have been quite unnecessarily extended, especially during alarming influxes on the usual current of disease; which opinion I maintained in my evidence before the Commissioners of Poor Laws' inquiry, and has been fully borne out by the Medical Reports associated with their proceedings.

In ordinary times it is, however, certain, that legitimate cases could not be found to occupy a sixth of the beds, and they must have remained vacant had not these hospitals been made asylums for the houseless and famishing poor, and for those labouring under diseases, often the consequence of misery alone, such as low fevers, dropsy, melancholy, and even mania. In three years, 1832, 1833, and 1834, I know that many beds in the Cork-street hospital, not occupied in the manner just adverted to, had been kept empty, wholly in compliance with the opinions of the ultra contagionists.

An experience of nearly forty years, as student and physician, in dispensary and fever hospital practice, enables me without hesitation to give it as my opinion, that the formation of medical districts, to each of which a fever hospital, dispensary, poor-loan fund, cow-pock institution, with surgical beds to the number of six in each, would be a very great improvement; and I have no doubt that under such an arrangement, one fever hospital on each side of the Liffey, with a soup-shop in each parish, would be found sufficient for the poor of Dublin during even fierce outbreaks of epidemic diseases; and that after these extraordinary swells subside, the bedsteads in the hospital, whether surgical or medical, might be most advantageously occupied by those labouring under parturition, accidents, or chronic disease; or, if disengaged accommodation should still remain, by the houseless and unemployed tradesman, predisposed by want to mental and bodily disease. As physician to the chief dispensaries of Dublin at the close of the last and beginning of this century; to the Cork-street hospital from its foundation until July last, and as one of the officers of Health in St. Peter's parish during the prevalence of the epidemic of 1817, 1818, and 1819, I have collected facts on this subject, from which alone these statements have been made.*

Having already, in comparing the relative agency of destitution, malaria, and contagion in the rise and growth of disease in Ireland since the beginning of this century, chiefly supplied what is omitted in the printed report by the Commissioners, I shall now, referring generally to my Sketch of Epidemics, and to that report, recapitulate from the former of these publications, my statements with respect to the effects of contagion on the medical officers of the Cork-street hospital, and their longevity, and thus show I did not state, as the latter does, that the physicians of that fever hospital were attacked by fever subsequent to 1823, but the contrary, viz.:—

The three physicians and the surgeon first elected to the Cork-street fever hospital, are all still living, except Dr. Mills, who died of a chronic disease long after he had resigned his office in that Institution, and which he did not hold more than two years; Dr. Barker was attached to the hospital from its beginning for twenty years; Dr. Abraham Colles was surgeon about three years, and myself thirty-one years. All the medical officers so attached, or subsequently added to the Cork-street fever hospital, *before* 1828, were attacked more or less severely after the commencement of their duties there, or their attendance at the houses of the sick poor. It was in this way that Dr. Dee and Dr. Lynch contracted the malignant typhoid disease, of which both died a few weeks after their election; they were the only physicians in the Cork-street fever hospital who died of disease so contracted. Dr. George Hagan died, I think, of a chronic disease, the result of long-continued exertion, it being aggravated by the baneful influence of a contagious atmosphere in the dwelling of the sick poor. It is moreover very remarkable, and a fact

* See the printed Reports of the Poor Law Commissioners.

highly instructive on the subject of contagion, that none of the junior physicians have been attacked with the prevailing disease since the unprecedented revolution towards malignity which occurred in 1823; and, though many have been added, and some of them been transferred to cholera hospitals since 1832, I have heard of none of them being attacked with symptoms of that epidemic.

The foregoing facts must conclude this section of reference, to my evidence in my annual Medical Reports, and in my memorials for investigation, since 1830, as well to the successive chief governors of Ireland, as in my testimony before the Medical Committee of the House of Commons, in August, 1834, and in my evidence to the Poor Law Commissioners, and in my petition to Parliament, June, 1836. On all these occasions I urged the necessity of investigation for public security. At the first of these periods, my leading object in seeking investigation of the nature of the prevailing epidemic, (as may be seen in my Comparative View then published,) was to show how far experience in the treatment during previous revolutions might assist in the adaptation of preventive and remedial measures, especially in the fever hospitals, to the threatened increase which excited intense panic, and, as has since been proved, unnecessarily produced great embarrassment in all the domestic and commercial relations of this country. At the second period, August, 1834, when the same epidemic threatened another fierce outbreak, I sought investigation with the same aim; but, in the last, namely, May, 1836, when the concurrence of moral and physical causes contributed to unite the malignity of all preceding epidemics, and produce a degree of mortality previously unknown even in Ireland. (See my petition to Parliament, presented by Mr. French, member for Roscommon,) my efforts for investigation were equally fruitless, farther than as I learned from the subsequent debates on the miscellaneous estimates, my petition was referred by the House of Commons of Ireland to a Medical Committee. The facts adduced even in this little treatise, I hope, will afford some aid in an enquiry of such vital importance. And should those sources of information I have adverted to, be laid open, namely, the annals of the Cork-street fever hospital, and the answers to my queries on medical statistics in the rural districts, furnished to the Poor Law Commissioners, I have no doubt of being able to supply an additional array of facts of great value on the pending questions of Poor Laws, or of medical reform for Ireland, whether estimated by the zeal with which, I hope, philanthropists are preparing to enter upon that enquiry, or even in the abstract calculations of political economists, who may entertain it with different views.

PROGRESS OF MEDICAL REFORM IN IRELAND.

To the Editor of the Medical and Surgical Journal.

Sir, The Irish medical profession owe you a great debt of gratitude for your unceasing exertions in turning the attention of your readers to the necessity of improving the medical charities of Ireland. To one who has so laboured it must be gratifying to learn that there is now a fair prospect, almost amounting to a certainty, that a law for the establishment and support of a comprehensive and efficient system of institutions for the relief of our sick poor will be introduced by Lord Morpeth in the course of next session. The report of a deputation that lately waited on his lordship will confirm this opinion. By it you will also see that it is now, at length, in the power of the profession to obtain useful legislation in this—to them, and the public—very important subject. But, should they neglect the present opportunity, another may not soon present itself.

That it will not, however, be neglected, there cannot be much fear. A meeting of physicians and surgeons of the province of Munster, is to be held in Cork, on the 10th of next month, as you will see by an advertisement in another paper I send you. In each county in the south, one or more preparatory meetings have been, or will soon be held; so that there can be no doubt that the profession in Munster will do its duty; and, from appearances, which are too striking not to make an impression, Leinster and Ulster will not long remain behind.

Whether there is any disposition in Connaught to follow so good an example, I am yet unprepared to answer; but I do trust, and expect, that those of that pro-

vince will not be so unwise, or so unmindful of what is due to themselves, to their *confreres*, and to the public, as to hold back on such an occasion. If disposed to do so, let them only look at the reports of the Irish Poor Enquiry Commissioners with reference to the institutions of that province, which reports must surely be enough to arouse the most apathetic.

Whilst on this subject—one which you know has for years occupied a good deal of my time and attention—allow me to thank you for some observations you have kindly made respecting me when noticing Drs. Barry and Corrie's Report on the Medical Charities of Ireland, in some late numbers of your excellent Journal. You observe, of this report (and the same might be said of Dr. Barrett's, another very able one)—that it is *"an abridgement from the comprehensive, laborious, and expensive work of Mr. Phelan."* I feel this to be a high compliment, indeed; and am greatly indebted to you for not forgetting the claims of an humble individual, so remote that he seldom can know what passes, on these occasions, at least, until after a long interval.

When Appendix (B), which contains the reports of the Medical Commissioners under the Irish Poor Enquiry reached me, I reluctantly felt anxious to compare it with my own work, lately reviewed by you, to satisfy myself whether the defects and abuses which I therein pointed out as incidental to our Irish Medical Charities were similar to those observed by these official inspectors. And you may be sure I was highly gratified in finding that, though differing in manner and form, and arranged in a different way, the very same defects, and the very same abuses, which I pointed out, are those chiefly insisted on by the Commissioners—a sure proof that there must be much more than surmise on the part of each, when the enquiries of a private, unofficial individual, and those of persons invested with all the advantages which Doctors Barry, Corrie, Borrett, and Rooney possessed, so nearly ended in the same results. But when, in addition, I found that every one of my suggestions as to the remedial measures, necessary to be adopted for the establishment and permanent support of a good system of medical charities in Ireland, even there recommended by these gentlemen, I could not help agreeing with you, that their reports are in some measure, though, perhaps, not so intended, *"an abridgement" of my work*, and that the one greatly confirms the statements and opinions given in the others.

In the entire of these three reports there is no reference made to the "Statistical Enquiry," which is the only work ever published on the same subject, with the exception only of the two small reports of the Irish Board of Health on County Infirmaries only, and one on *some* of the Dublin Hospitals. On this, however, I should make no complaint or observation, had not the Medical Commissioners referred to *three* other documents, *neither* connected with Irish medical institutions. These are, an Address of Dr. Conolly, of Warwick, made in 1834; a Report on the St. Cuthbert's Poor (Edinburgh); and one of M. Ferrus, of the *Bicetre*. Had not such references been made, I would have supposed that it was contrary to the instructions received by the Medical Commissioners to quote any authority whatever. But as, in these instances, they have departed from this rule, I hope I shall be considered justified in claiming priority of publication, and in observing that there is scarcely an important defect or abuse pointed out by the Commissioners, or any considerable suggestion made, that is not to be found in my work, and which was on the Commissioners' table long before their reports were made out or printed.

I trust, however, that in doing so I may not be considered as in the slightest degree intending to detract from the merits of these gentlemen; on the contrary, I admit the reports of the three first to be of great value. That of Mr. Roony is, in many respects, greatly inferior to either; and, as might be expected from one tramelled by education, interest and feeling, that gentleman entirely overlooks one of the greatest evils of our county infirmary system, viz. the ineligibility of any but Dublin physicians and surgeons to these institutions.

Dr. Corrie endeavours to explain why the Reports have not been accompanied by statistical tables, assigning as a reason, that such were already in the hands of the Commissioners, and before the public. Their being in the hands of the chief Commissioners is surely no use to the public, unless they are published by them. And if the doctor implies that they are, he is mistaken. There are in the Commission Reports several tables, a part of the Returns

from various institutions, but there are none which give a view of any one class of these institutions; which surely must be reckoned a considerable omission, and one which it is wonderful that either the chief, or Medical Commissioners should have overlooked. Without them there is no question that the Medical Reports are, to a great extent, imperfect. I am sorry that the medical institutions did not avail themselves of the occasion, and of the advantages they enjoyed in having access to any existing documents, to prove the correctness of the statistical tables given with my "Enquiry," especially as I believe there are none else before the public.

In a note to Dr. Corrie's *Pamphlet* Report, he states, that he thinks there is a slight error in my fifth table, and that he prefers that of the Board of Health, which makes the average annual expense of each bed £.21 2*s*. 7*d*. On reference to each table, however, I find that given in mine is quite correct, viz. £.21 15*s*. 9*d*. The error made by the Board consists in this:—The New Meath Hospital in Dublin, is there put down as containing 91 beds. Now, 55 only of these are infirmary beds; 36 being appropriated to the reception of fever patients, the expense for which are not included in the infirmary accounts for that year. Knowing this to be the case, I only gave the 55 beds, thereby correcting what had been overlooked by the talented Secretary of the Board. The mistake was a natural one to be made by both gentlemen, especially by Dr. Corrie, from his want of previous practical acquaintance with *our* medical institutions.

I am sorry to be obliged to occupy so much of your valuable space,

"I have the honor to be, Sir,

"Your very obedient humble servant,

"Denis Phelan, M.R.C.,

"Surgeon, London.

Clonmel, Dec. 29, 1836."

COX'S MEDICO-CHIRURGICAL ALMANACK;

Containing, in addition to the general Calendar and Relative Tables of an Almanack, the birth and obituary of celebrated Medical Persons; Meetings of the Medical and Learned Societies; Medical Colleges; Metropolitan Hospitals and Dispensary; Lists of the Materia Medica, and of the Præparita et composita of the New London Pharmacopœia, with the old and new names and the doses; Magendie's Remedies, with their doses; Rules for the immediate reduction of Dislocations; Antidotes for Poisons, &c.

This Sheet Almanack is expressly intended to be suspended in the Library of the Physician, the Surgery of the General Practitioner, and the Dispensary of the Chemist and Druggist. The conception of it was happy, and its execution is admirable. We have now a Medical as well as a Legal Sheet Almanack, which will be useful to the class of society for which it is intended. It is all that it professes to be, and cannot fail to have a large circulation. Among much valuable information, we find the following which we place before our readers.

POISONS.

MINERAL.

Acids. 1. *Sulphuric, or Oil of Vitriol; Nitric, or Aquafortis; Muriatic, or Spirit of Salt.* Neutralize the acid by giving magnesia, powdered chalk, old mortar, or soap mixed with water, and promote speedy vomiting by tickling the throat. Diluents and a mild regimen to follow. 2. *Oxalic Acid,* Chalk and water are best. 3. *Prussic Acid.* Use emetics or the stomach pump; cold affusion; free inhalation of ammonia or chlorine; give ammonia with camphor mixture, hot brandy and water and other stimulants; and rouse the system in every possible way.

Alkalies. *Potash, Soda, Salt Petre, Sal Prunella, &c.* The same treatment as for *Ammonia.*

Ammonia. *Sal Ammoniac, Volatile Smelling Salts.* Vomiting to be promoted by copious draughts of mucilaginous drinks, containing a dilute acid, as vinegar, lemon juice, &c. Nervous symptoms to be allayed by anodynes and antispasmodics.

Antimony. *Tartar Emetic, Butter of Antimony, Glass of Antimony.* Let the patient swallow large draughts of warm water, and excite vomiting by tickling the throat with a feather: while that is being done, prepare, without loss of time, some vegetable decoction, such as decoction of bark, infusion of galls, or common tea. Tincture of bark, bark in powder, mucilaginous drinks, are also proper. If the stomach should continue very irritable, give opiates. Treat other symptoms according to their nature.

Arsenic. *White, Yellow, or Red Arsenic, Arsenical preparations.* The stomach pump should be used if it be at hand; if not, as there is no antidote, expel the poison immediately by emetics of sulphate of zinc (in *scruple* doses) should it not have excited vomiting itself, and encourage the evacuation with milk, white of eggs, gruel, or any mucilaginous drinks. Emollient glysters are also to be given to remove any arsenic which may have escaped into the intestines. The subsequent diet to be mild, and the inflammatory or nervous sequelæ to be combated by the usual means.

Baryta. *Salts of Baryta.* Give freely a weak solution of Epsom or Glauber's salts, to decompose the poison, and excite vomiting.

Bismuth. *Salts of Bismuth, Pearl White, Face Powder.* No chemical antidote, therefore give emetics, and promote vomiting with copious draughts of milk or mucilaginous drinks. Subsequent symptoms to be treated on the usual plan.

Copper. *Verdigris, Blue Copperas, Mineral Green, Blue Verditer, Food or Pickles rendered poisonous by copper.* Give milk, white of eggs, or mucilaginous drinks until the stomach is freely evacuated. Iron filings and ferrocyanate of potash, said to be deserving of considerable confidence. If spasms of the alimentary canal be severe, opiates should be given, and emollient clysters to evacuate and lubricate the bowels.

Iodine. *Salts of Iodine.* Mucilaginous drinks to be freely taken, and large emollient clysters administered.

Lead. *Sugar of Lead, White Lead, Red Lead, or Litharge.* Give an emetic of zinc, and mucilaginous drinks; bleed if the pulse be hard; then freely exhibit cathartics, particularly castor oil and Epsom salts, combined with opium or hyoscyamus; emollient clysters; warm bath; and subsequent milk diet.

Lime. *Quick-lime.* Give freely, vinegar, lemon-juce, or any vegetable acid; then demulcent, and bleed if necessary.

Mercury. *Corrosive Sublimate, Calomel, Oxides of Mercury.* Give the white of an egg immediately, and repeat it every two or three minutes; freely, milk, barley-water, linseed tea, to wash out the stomach effectually; then the bowels to be acted upon by mouth and by emollient clysters; and any inflammatory indications properly attended to.

Phosphoros. No antidote, therefore excite vomiting by large draughts of water mixed with magnesia, and avoid oily or fatty substances.

Silver. *Nitrate of, or Lunar Caustic.* Give common salt dissolved in water to decompose the poison; in other respects treat as for *corrosive sublimate.*

Tin. *Muriate of Tin, Putty Powder.* Give freely milk; exhibit purgatives and clysters; and, if necessary, subdue any urgent symptoms by bleeding, the warm bath, opiates, and aromatics.

Zinc. *White Vitriol.* The same treatment as for *Copper.*

VEGETABLE.

Irritants. 1. *Pasque Flower, Black Bryony, Marsh Marygold, Colocynth or Bitter Apple, Mezereon, Stavesacre, Euphorbia or Spurge, Hedge-Hyssop, Savine, Elaterium or Squirting Cucumber, Daffodil, Butter-cups, Water Crowfoot, Lesser Spear-wort.* 2. *Gamboge, Jalap, Scammony.* No direct antidote for any of the vegetable irritants: remove the poison by emetics; give demulcents, and atten to supervening inflammation.

Narcotics. 1. *Henbane, Lettuce, White Poppy, Woody-Nightshade.* — 2. *Opium, Laudanum, Morphine, &c.* The stomach-pump, if at hand; strong emetics (in doses of 4 or 5 grains of tartar emetic, 20 or 30 grains of white vitriol, or one to three grains of sulphate of copper) until vomiting is excited; keep the person in constant motion; open the jugular, and use artificial respiration when necessary; if scarcely any pulse, get down wine, brandy, and ammonia; active purgatives by mouth and per anum; coffee and saline medicines when recovering. Acids not to be given until the poison is completely removed.

Narcotico-Acrids. *Aconite or Wolf's bane, Fool's Parsley, Deadly Nightshade, Brucea, Water-Hemlock, Cocculus, Meadow-Saffron, Hemlock, Thorn-apple, Foxglove, Black Hellebore, Tobacco, Hemlock-Dropwort, White Hellebore, Nux Vomica, Camphor, &c.* If narcotic symptoms predominate, then adopt the same measures as for *Opium;* if irritating, the treatment advised for *Irritants.*

MISCELLANEOUS.

Fungi. *Poisonous, Vernal, Gregarious, and Red-milked Agarics, &c.* No antidotes; clear the stomach by emetics, then give frequent doses of Epsom or Glauber salts, with stimulating clysters and other stimulants, unless contraindicated by inflammatory symptoms.

Insects. 1. *Spanish fly.* Free dilution with milk and demulcent fluids, bleeding, the warm bath, opiate frictions, and clysters of mutton broth and oil. 2. *Wasp, Hornet, Bee.* If possible remove the sting, then apply common salt diluted with water; or alleviate the pain by an anodyne, or any oily and cool application.

Viper. *Black Viper.* Either apply a cupping glass, or remove the bitten part by incision, or cauterize the spot; give brandy, ammonia, with opiates; arsenic, in gr. ss. or gr. j. doses, has been recommended.

Fish. *Mussels, Lobsters, Conger Eel, &c.* Give a powerful emetic, and assist the vomiting by warm fluids; purge with castor oil; then acidulous drinks, with 20 to 40 drops of æther at short intervals, or, if necessary, laudanum in considerable doses.

Alcohol. *Brandy, Wine, Spirituous Liquors.* The stomach pump, or a powerful emetic, and vomiting, freely encouraged with warm water; erect position; cold applications to the head; friction to the extremities; and, if required, bleeding from the jugular vein.

REDUCTION OF DISLOCATIONS.

Lower Jaw; *Complete or Partial.*—Wrap a handkerchief round your thumbs, place them on the coronoid processes, depress the jaw, and forcing *backwards* and *downwards* the bone slips into its place.

Ribs.—Desire the patient to make a deep inspiration, then depress the projecting part, put a wet pasteboard splint upon the part, and apply a flannel roller over it.

Clavicle: *Sternal and forward.*—Place your knee against the spine, draw the shoulders backwards, and apply the clavicle-bandage. 2. *Scapular end.*—Proceed in the same way, but draw the shoulder backwards and upwards; then put a thick cushion into each axilla, and finally the clavicle-bandage, the straps of which should be broad enough to press upon the clavicle and scapula.

Humerus: *Downwards and inwards.*—Lay the patient on his back, either on a bed or sofa, and bring him near to the edge of it; secure the scapula with a towel, and give it to a person to hold fast; then tie the handkerchief above the elbow, (having previously passed a wetted roller round the arm,) carry the patient's arm from his side, and set yourself on the edge of the bed; then place your heel in the axilla, and extend the arm, draw steadily for three or four minutes, and the bone is replaced. 2. *Forwards beneath the clavicle.*—Extension must first be made obliquely *downwards* and *backwards*, until the head of the bone has passed the coracoid process, then the arm may be raised in the *horizontal* direction, and by pressure of the heel in the axilla, the bone will be returned. 3. *Backwards on the dorsum scapulæ.*—Reduced in the same way as the first, but the head of the bone should be rotated *inwards*. 4. *Partial, the head of the bone thrown forwards against the coracoid process.*—Reduction same as for those forwards, afterwards securing the shoulders by the clavicle-bandage.

Elbow: *Both bones backwards.*—Place the patient in a chair, take hold of the wrist, and put your knee on the inner side of the elbow-joint, then bend the fore-arm, and at the same time press upon the radius and ulna with the knee; whilst the pressure is kept up, forcibly, but *gradually*, bend the arm, and the bones will slip into their places. Afterwards support the arm in a sling at rather less than a right angle, apply a bandage to be kept wet with evaporating lotions, and let the arm be fixed. 2. *Laterally, the ulna thrown either on the external or internal condyle.*—Bend the arm over the knee, without turning it directly outwards or inwards, and the muscles on the stretch, will give the bones the proper direction for reduction. 3. *Ulna backwards.*—Bend the arm over the knee, and draw the fore-arm downwards. 4. *Radius forwards.*—Place the hand in a supine position, bend the fore-arm, and make extension from the hand, without including the ulna.

Wrist: 1. *Both bones forwards or backwards.*—Grasp the patient's hand with your right, and support the fore-arm with your left hand, whilst an assistant places his hands firmly round the arm, just above the elbow; then let both extend, and the bones are soon replaced. Finally, apply a roller round the wrist, wetted, and put a splint before and behind. 2. *Radius forwards.*—Same treatment as for both bones. *Ulna backwards.*—When the bone is put into its place, put a compress of leather on its extremities, to keep it in a line with the radius: splints should be placed along the fore-arm, and afterwards a roller, to confine them with firmness.

Hip-joint or Femur: 1. *Upwards, on the dorsum of the ilium.*—Bleed to

twelve or twenty ounces, or more, if a strong man; next place him in a warm bath, heated until fainting: whilst in the bath, give one grain of tartar emetic to create nausea; then wrap him in a blanket, and place him on a table, between two strong posts. Place the patient on a table with a blanket on his back; then a strong girt is passed between his pudendum and thigh, and this is fixed to one of the staples. A wetted linen roller should be applied just above the knee, and on this a leather strap is to be buckled, having two straps with rings at right angles with the circular part. The knee should be slightly bent, not quite at a right angle, and brought across the opposite thigh, a little above the knee. The pullies are to be hooked to the rings on the circular strap, and fixed to the other staple. You should now tighten the pullies, till you see the bandage is on the stretch, and the patient begins to complain of pain; then wait a little, with the degree of extension you have now made, to give the muscles time to fatigue; then draw again gently, and, when the patient complains much, stop again, until the muscles yield; and so go on, until you find the head of the bone is brought just opposite the acetabulum. Let the same extention be kept up by another person taking the string of the pullies, and then rotate the limb gently, and the bone will generally slip into its place. You must not expect to hear a snap when the bone is returned, as by using the pullies, the muscles are so much relaxed, that they cannot act with sufficient violence; and you can, therefore, only tell if it is reduced, by loosening the bandages, and comparing the length of the limb. If there should be any difficulty in bringing the head of the bone over the edge of the acetabulum, you must pass your hand, or napkin, under it, and lift it over the edge of the socket. When the reduction of this dislocation is effected, you should take care in removing the patient to his bed, as, from the relaxed state of the muscles, the dislocation would again happen, and that from a cause so trifling that you would not suspect it to have occurred. 2 *Downwards, or into the foramen ovale.*—Place the patient on his back, separate the thighs as widely as possible, and place a girt between the pudendum and upper part of the thigh; fix the girt to the staple in the wall, then take hold of the ankle of the dislocated side, and draw it over the other leg, or, if the thigh be very large, behind the sound limb, and the head of the bone usually slips into the socket. Or the thigh might be secured by a bed-post being received between the pudendum and the upper part of the limb, and the leg be carried inwards, across the other. But the best plan, in general, is to fix the pelvis, by a girt passed round it, and crossed under that which passes round the thigh, to which the pullies are to be attached, otherwise the pelvis moves in the same direction as the thigh. 3. *Backwards, into the ischiatic notch.*—Let the patient be laid on a table, on his side, and a girt passed between the pudendum and inner part of the thigh, to fix the pelvis: then pass a wetted roller round the knee, and buckle the leather strap over it; let a napkin be passed under the upper part of the thigh; next, bring the thigh over the middle of the opposite one, and then begin to make your extension with pullies. Whilst the extension is making, an assistant should grasp firmly the napkin at the upper part of the thigh with one hand; and, resting the other hand on the pelvis, he should lift the thigh as much as possible towards the acetabulum, so as to get the head of the bone over its edge. 4. *Forward, on the pubis.*—Place the patient on a table on his side; then carry a girt between the pudendum and the inner part of the thigh, and fix it in a staple, a little before the line of the body. The roller is to be passed around the thigh, and the pullies fixed as in the dislocation upwards, and the extension is to be made in a line behind the axis of the body, the thigh bone being drawn backwards. After this extension has been continued some time, pass a napkin under the upper part of the thigh, whilst an assistant, resting one hand on the pelvis, lifts the head of the bone over the pubes and edge of the acetabulum.

PATELLA: 1, 2. *On the internal or external condyle.*—Place the patient in a recumbent posture, and let the leg be raised by lifting it at the heel, by which you relax the extensor muscles of the thigh in the greatest possible degree; you then press on that edge of the bone which is furthest from the articulation, and this raises the inner edge of the bone over the condyle of the femur, and it is directly drawn into its proper position by the action of the muscles. Evaporating lotions of spirit and water are to be employed, and afterwards, say two or three days, bandages should be applied.

3. *Upwards, the ligamentum patellæ torn through.*—First apply leeches, and afterwards evaporating lotions, from four to seven days: then apply a roller round the foot and leg, and keep them completely extended by a splint behind the knee; then buckle a leather strap above the knee, and to this, let another strap be fastened, which is to be passed under the foot, and buckled to the opposite side of the circular strap. The bone is in this way drawn down to the ruptured ligament, and an union, consequently, takes place. The patient, at the same time, should continue in the sitting posture, so as to relax the extensors of the leg which are inserted into the patella.

KNEE-JOINT: *Femur from the semilunar cartilages.*—Bend the limb back as far as possible, and the cartilage will slip into its place: then apply a bandage, secured lightly above and below the patella.

TIBIA: *At the knee-joint, either way.*—Reduce by simple extension; avert inflammation and promote the union of the torn ligaments; keep the limb motionless, and after three weeks have elapsed, gently bend and extend the joint daily.

ANKLE-JOINT: 1. *Inwards.*—Place the patient on a mattrass on his injured side, and bend the leg at right ankles with the thigh, so as to relax the gastrocnemii; let an assistant grasp the foot, and gradually draw it in a line with the leg; at the same time, fix the thigh, and press the tibia downwards, to force it on the articulating surface of the astragalus. After the reduction, let the limb remain on its outer side in the bent position, with the foot well supported, a many-tailed bandage should be applied, and kept wet with the spirit wash. 2. *Outwards.*—Place the patient on a mattrass, on his back, bend the thigh at right angles with the body, and the leg at right angles with the thigh; let the foot be held firmly by one assistant, and the thigh grasped under the ham by another; then extend the foot in a line with the leg, and press the tibia inwards towards the astragalus. The limb should be laid on its outer side, resting on splints with foot-pieces, and a pad should be placed on the fibula, above the outer ankle, extending a little way up the bone, so as to support that part of the leg. 3. *Forwards.*—Lay the patient in bed, on his back; an assistant should grasp the thigh at its lower part, and draw it towards the body, whilst another pulls the foot in a line from the leg, and you then push the tibia back, to bring it into its proper place: afterwards rest the leg on the heel, apply splints on each side of the leg, with foot-pieces to support the foot at right angles with the leg.

The London Medical
AND
Surgical Journal.

Saturday January 14, 1837.

THE NEW METROPOLITAN UNIVERSITY.

THE Chancellor of the Exchequer displayed much skill in establishing it as a law in the constitution of the NEW UNIVERSITY, that NO TEACHERS should be eligible for EXAMINATORS. By this single *coup* the poisonous dagger of Reform was thrust into a vital organ of the corruptionists, and unless the mercenary Junta of Lincoln's-Inn-Fields can find out a remedy for the *virus* which has been innoculated into their Corporation by this wound, it cannot fail to be succeeded by a series of symptoms of "Constitutional Irritation," which must at no very distant period, completely change the system of our Medical Education, and subvert the fraudulent bye-laws of our Medical Corporations,

The palpable fact that the ruling body of the College of Surgeons are almost every one of them, either themselves or their relations, teachers of some branch of Medical Education, and the apalling truth that every bye-law that has been enacted by that talented Junta, has been in regard to education, nothing but an ingenious device to extort money from the pocket of the Student; the

law of the New University which *excluded* such a vile system of fraud ought to be received from the Government, as the harbinger of a more propitious and a more salutary state of things. The circumstance that each examinator has been in the habit of deriving a large income, and that the Council of the College of Surgeons have been enabled to erect that Stupendous Mansion in Lincoln's-Inn-Fields entirely at the Students' expense, are undeniable proofs of the extent to which the iniquitous system of the Government of the Council of the College of Surgeons must have been carried.

And whilst by this system, enormous sums of money were levied on the student, the public were no less imposed upon by numberless incompetent individuals receiving the contemptible diploma of the College. So low indeed in estimation has been the diploma of the College of Surgeons, that the Medical Boards both of the Army and Navy have, for a long time past, deemed it necessary, themselves, to enquire into the education, and institute an examination into the professional acquirements of those who are desirous of entering into either of these services.

Reflecting on past events, and on the system of examination at Lincon's-Inn-Fields, how many examples crowd upon our recollection, of the *facilities* which were afforded to students of certain schools, of the enormity of the frauds committed by the CERTIFICATE system by the impertinences and insults which were heaped on students who had not been educated at their own hospitals! It reqnires no great effort of memory to recollect scenes of the most revolting description, which not unfrequently took place from the perturbed state of the intellectual organs even of some of the most *eminent* of the Board of examiners. Sir Everard Fuddle, as he was not inappropriately nicknamed, has often appeared at that board in such a state that had he now lived and attempted to stagger home, his meandering tract, and the difficulty he had in ballancing his crazy frame, could not have failed arresting the attention of our vigilant police, and a recital of his happy condition when brought up on the following morning before a magistrate, and a fine for drunkenness imposed upon him would have afforded a most convincing argument to the Chancellor of the Exchequer, to shew the necessity of *public* examinations. The far-famed Sir William Blizard was also remarkable for his Bacchanalian reveries at the midnight meetings of the Lincoln's Inn council, as he was for his other voluptuous gratifications. It is recorded of this veteran examinator, at one of his bewildering examinations on the structure of the human eye, wishing to know what part of the organ the canal of Petit was situated at, he asked, with a convulsive twitch of the diaphragm, "Pray, my good fellow, do you know whereabouts in the eye, is the PADDINGTON CANAL?"

There can be no stronger criterion of the benefits which may be reasonably expected to be derived from the institution of the New University, than the tone of irritation which the CORRUPTIONISTS have assumed in conversation, as well as in their writings, since the draft of the charter has been laid before the public. The letter from "M. D." which some time ago appeared in the "TIMES," was evidently the effusion of a disappointed mind, and of one who was justly alarmed for the fate of the old system, whilst the *feeler* which was issued forth by Messrs. Cooper, Brodie, Chambers, and M'Leod, in their sub-

scription journal, was undoubtedly the effusion of a sorrowful and disappointed heart.

"M. D.," whose language and modes of expression are as unpolished as some of his sentiments coarse, and some of his information false, must have indeed lived in a very obscure position in society, if he speaks the truth, when he affirms, that he never *heard* of the names of several of those individuals who form the medical senate of the New University.

But, supposing that there could have been no plausible objections for not admitting TEACHERS as members of the senate of the New University, and that the Chancellor of the Exchequer had considered the propriety of electing Examinators from amongst the conclave of Lincoln's-Inn Fields, or from amongst the bigoted old ladies, dowagers of Pall Mall, East; how is it possible for any man of common sense to review a list of such bodies without being at once struck with the base and unfit materials of which they are chiefly composed. It is quite clear that such a man as Sir Astley Cooper could not have been expected to devote the requisite hours of his valuable life to be asking a parcel of school-boy's questions day after day, and for which he would receive but a very small remuneration in comparison to what his share must have amounted to of the spoil at Lincoln's-Inn-Fields. And though every one must regret that in place of communicating to his professional brethren the results of his extensive experience, he has been amusing himself with tying blood-vessels and compressing the vertebral arteries of rabbits, yet such occupations, however trifling, and perhaps useless, are much more suitable to his one of mind and early habits than giving his aid to raise an establishment which would, in the smallest degree, interfere with that system of things under which auspices he had been reared and fattened!

Sir Benjamin Brodie might certainly, with that caution and strict attention to his own interest, have had more difficulty in *arranging* his *future* plans than the worthy knight of Guy's Hospital. He had not yet reaped that *liberal* allowance of the students' money which had been so profusely bestowed on Sir Astley. His worldly caution however must also have pointed out to him that a storm was gathering, and that it might have been prudent for him to quit Lincoln's-inn-Fields before his coadjutors were shipwrecked, and embark his future destiny in prosecuting in the New University a system of jobbing and intrigue. By those who are capable of judging of his peculiar talents and disposition, it was considered that his withdrawing his guardianship from King's College was a preamble to but more important changes; and those who are ignorant of what passed at his interviews with the Chancellor of the Exchequer, and the ingenious manner which was employed to bring about these intentions, made some think that the talented knight was not unlikely to become a member of the new senate. Whatever may have been his projects, they were, however, most skilfully subverted by offering him terms, which he durst not accept, consistent with keeping a good fellowship with those with whom he has been so long labouring in the cause of monopoly and corruption.

Dr. Chambers has also mentioned to bring forward his name, in his own Journal, as one of those highly-gifted individuals in monopoly and misrule, whom the government *ought* to have included in

the list of examinators. Unless, as the coadjutor of M'Leod, and the joint fabricator and subscriber of one of the most degraded and unprincipled periodicals that has ever appeared, the name of Chambers is unknown in the annals of science, however well qualified he may be to be ranked as one of the *respectable* fellows of the antiquated establishment in Pall Mall, East.

MEDICO-CHIRURGICAL FORMULARY, 1837.

(Continued from page 620.)

Pilulæ Antirheumaticæ.

℞ Opii, Ipecac., Hydr. Subm., Antim. Pulv. āā gr. j.; Camphoræ gr. ij. Sit pilula omni nocte sumenda.

Pilulæ Antispasmodicæ.

℞ Moschi Pulv. ℈ss.; Gum Ammon. ℈ ij.; Opii gr. v.; Ol. Menth. Pip. m. iv.

Divide in pil. xviij.—j. 3. 4. horis.

Pilulæ Belladonnæ. (H. of Italy.)

℞ Ext. Belladonnæ gr. iv.; Conf. Rosæ q. s. ut fiant pil. xvj.—j. secunda hora.

In scarlatina and pertussis.

Pilulæ Brucinæ. (Magendie.)

℞ Brucinæ Pulv. gr. xij.; Conf. Rosæ ʒss. Divide in pil. xxiv. in foliis argenteis obvoliendas. Dosis ij.—vi. quotidie.

Strongly advised in paralysis by Magendie and Bardsley.

Pilulæ Bromatis Ferri. (Magendie.)

℞ Ferri Bromatis, Pulv. Acaciæ āā gr. xij. Conf. Rosæ ℈ j. In pil. xxiv. distribue, ij. m. n.

Used in scrofula, suppression of the menses, and hypertrophy of the ventricles when iodine does not evince sufficient action, or when the patient is long accustomed to the remedy.

Pilulæ Conii C. (Ph. Lond. 1836.)

℞ Ext. Conii ʒ v.; Ipecacuanhæ ʒ j.; Misturæ Acaciæ q. s, M.

Pilulæ Conii et Hydr. Subm.

℞ Ext. Conii gr. ij.; Ipecac., Scillæ Pulv. āā gr. j.; Hydr. Subm. gr. j. Expectorant, alterative and diuretic.

Pilulæ Conii et Camphoræ.

℞ Ext. Conii gr. iij.; Camphoræ gr. ij. Fiat pilula h. s. s.

In chordee and painful erections.

Pilulæ Diaphoreticæ.

℞ Opii, Ipecac. āā gr. j. Camph., Pulv., Antim. āā gr. ij; Mucilag. Acaciæ q. s. Fiat pilula.

In fevers, rheumatism, asthma, chronic bronchitis, &c.

Pilulæ Diureticæ.

℞ Hydr. Subm. gr. iij.; Scillæ Pulv. Digitalis Pulv. āā gr. j.; Syrup. q. s. Sit pilula semel in die sumenda.

Alteræ.

℞ Pil. Scillæ C. (Ph. Lond.) gr. x. Hydr. Submur. gr. ij. Fiant pilulæ tres quotidie sumendæ.

In dropsies, chronic diseases of the lungs, asthma, chronic bronchitis, or long standing winter cough.

Pilulæ Crotonis Tiglii.

℞ Ex. Colocynth. C. ʒ j.; Olei Crotonis Tiglii m. vj.—x.; Ol. Menth. Pip. m.v. In pilulas xij. Divide j pro dosi.

Exhibited when the ordinary catharti pill does not produce the desired effect.

Pilulæ Emmenagogvæ.

℞ Pil. Aloes C., Pil. Ferri C. āā ʒ j. O Sabinæ, Olei Rutæ āā gutt. iij. Pulv. Capsici gr. viij. Tere intim et in pilulas xxiv. divide, ex his su mat æger j. ter in die.

Pilulæ Expectorantes.

℞ Ipecac. Scillæ āā ℈ j.; Antim Pul ℈ ss.; Conf. Rosæ q. s. Fiant p lulæ xx.—j. m. n.

Pilulæ Hydrarg. Chloridi C. Ph. Lond. 1836.

℞ Hydrarg. Chloridi, Antim. Oxy. Su phureti āā ʒ j.; Guaiaci ʒ ss.; Sa chari Fæcis ʒ ij. Tere Hydrargy Chloridum cum Antimonii Oxy. su phureto, dein cum Guaiaci Residu et sacchari fæce, ut fiat unu corpus.

Pilulæ Hydrargyri Iodidi.

℞ Hydr. Iodi ʒj. Confect. Rosæ Caninæ ʒiij.; Zingiberis Contritæ ʒj. Simul contunde donec corpus unum sit.

Pilulæ Ipecacuanhæ C.

℞ Pulv. Ipecac. C. ʒiij.; Scillæ recens exsiccatæ, Ammoniaci āā ʒj.; Misturæ Acaciæ q. s. Simul contunde, donec corpus unum sit.

Pilulæ Hydrarg. C. Rheo.

℞ Pil. Rhei C. ʒj.; Pil. Hydr. gr. vj.—x.; Olei Menth. Pip. m. iv.; Strychniæ Pulv. gr. j. In pilulas xv. divide j bis in die.

In dyspepsia, nervous, hysterical and neuralgic affections, and chronic complaints.

Pilulæ Hydr. Proto Ioduret.

℞ Hydr. Proto-Iodureti gr. j.; Ext. Hyoscyami gr. xij.; Ext. Gentianæ ℈j.; Glycyrrhizæ Pulv. gr. x. Sit massa et in pilulas xij. dividenda, capiat j. mane nocteque.

Pilulæ Quiniæ. (Ryan.)

℞ Quiniæ Sulph. gr. xij.; Ext. Gentianæ ℈j.; Pil. Rhei C. ℈ij.; Pil. Hydr. gr. vj. Forma in pil. xij.—Dosis una ter in die.

In atony of the digestive organs as a tonic and aperient.

Pilulæ Saponis C. Opio. (Ph. Lond.)

Pilulæ Scillæ C.

See Diuretic and Expectorant Pills.

Pilulæ Strychniæ.

℞ Confect. Rosæ ℈iss.; Glycyrrhizæ Pulv. gr. x.; Strychniæ Pulv. gr. j. Tere intime et in pilulas xij. divide j m. n.

In disorders of the cerebro-spinal system, nervous affections, epilepsy, hysteria, chorea, hypochondriasis, neuralgiæ. spinal irritation, hemicrania, the different kinds of palsy, including partial or general, paralysis agitans, diarrhœa with rice coloured dejections premonitory of blue cholera. I prescribe this medicine more freely perhaps than any other, and with remarkable success.

Pilulæ Stypticæ.

See Pil. Acet. Plumbi.

Pilulæ Terebinthinæ.

℞ Terebinthinæ ʒj.; Ext. Rhei ʒss.; Camphoræ ʒss.; Copaibæ q. s. In pilulas gr. iv. divide sumat ij. ter in die.

In blennorrhagia, leucorrhæa and blennorrhæa.

Pilulæ Veratrinæ. (Magendie.)

℞ Veratrinæ gr. ss.; Acaciæ Pulv. ℈j.; Syrupi. q. s. Fiant pilulæ vj.—j. 3. in die.

In gout, rheumatism, anasarca and other diseases for which colchicum is prescribed.

Pulveres. (Ph. Brittanic.)

℞ Bismuthi Subnitr. gr. iv.; Mag. Calcin., Sacch. Puri. āā ℈ij. In chartulas iv. divide j. ter in die.

Very efficacious in pyrosis.

Pulvis Anthelminticus.

℞ Corallinæ Officin., Seminum Contra* Rad. Filicis Maris āā ʒj. Fiat pulvis in usum.

Half a drachm or a drachm may be made into pills, or a few grains according to the age of the infant, exhibited in tea or in infusion of senna.

Alter.

℞ Scammon., Rhei, Hydr. Subm. āā ʒj.; Sacchari ʒiij.; Pulv. Arom, ℈j. M.

Dose x.—xij. grains to infants.

Alter. (Dupuytren.)

℞ Jalapæ Pulv. ʒss.; Rhei Pulv. gr. x.; Hydr. Subm. gr. ij.—Misce.

May form three or four doses according to the age of the infant.

Pulvis Antipsoricus.

℞ Sulphuris, Carb. Ligni āā ʒj.

A pinch of this powder is mixed with oil and rubbed on the parts affected with itch.

Alter. (Chaussier.)

℞ Sulphuris, Plumbi Acet. āā ʒj.; Linci Sulph. ʒss.—Misce.

Used in the same manner as the last, and is free from the unpleasant odour of most of the unguents for the same purpose.

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* Semen Contra Vermes is composed of Artemisia Contra, Judiaca, and Santonica.

PULVIS ANTI-RHEUMATICUS. See PULV. DIAPHORETICUS. (RECAMIER.)

PULVIS ANTISPASMODICUS.

℞ Cinchon. Pulv. ʒ ij.; Valerianæ Pulv. ʒ j. M. Divide in ch. xij. quotidie sumendas.

ALTER. (H. of GERM.)

℞ Moschi gr. xxxij.; Opii gr. iv.; Sacchari ʒ j. In ch. xij. divide j singulis horis.

PULVIS CATHARTICUS.

℞ Jalapæ Pulv. ℈ j.; Hydr. Subm. gr. v.; Pulv. Cinnam. C. vel. vel Zingiberis gr. v. M.

PULVIS CATHARTICUS INFANTIBUS.

℞ Jalapæ Pulv. gr. ij.; Rhei Pulv. gr. j.; Canellæ vel. Pulv. Arom. gr. j. M.

PULVIS DENTRIFICUS.

℞ Cinchon. Mag. Calc. āā ʒ iv.; Canellæ Pulv. ʒ j.; Olei Caryoph. m. j. M.

ALTER.

℞ Pulv. Cinch. ʒ ij.; P. Cinnam. ʒ ij.; Pulv. Iridis Florent. ʒ j.; P. Cretæ ʒ j.; P. Carb. Lig. ʒ ij. Misce.

ALTER. (MAGENDIE.)

℞ Chlor. Calcis. Arid. gr. iv.; Corallinæ Rubræ ʒ ij. M.

Applied with a new brush wetted, to render yellow teeth of their natural colour.

PULVIS CONTRA CHOREAM.

℞ Quininæ Sulph. gr. xij.; Valerianæ ʒ j.; Assafœtidæ ʒ ss.; Rhei Pulv. ʒ j. Divide in ch. xij.—j. m. n., in cyatho Aquæ cum Saccharo.

ALTER.

℞ Ferri Carb. ℈ j.; Pulv. Cinnam. C. gr. x. M. bis vel ter in dies.

In neuralgiæ in different parts of the body.

PULVIS DIAPHORETICUS.

℞ Potassæ Nitratis gr. x.; Camphoræ gr. iv.; Acaciæ Pulv. ℈ j. In partes iij—j secundis horis.

ALTER.

℞ Ipecac. Pulv. C. gr. x.; Potassæ Nitratis gr. v. Sit pulvis.

ALTER.

℞ Antim. Pulv. gr. iv—vj.; Potassæ Nitratis gr. vj. M.

PULUIS DIURETICUS (RYAN).

℞ Jalapæ Pulv. C. ʒ vj.; Pulv. Scillæ, Digitalis, Hydr.-Subm., Antim., gr. xij.; Pulv. Cinnm. C., vel Zinziberis ℈ j.

In chartulas xij divide, quarum sumatur i. m vespereque. Very effectual in dropsies.

PULVIS CONTRA EPILEPSIAM.

℞ Zinci Oxidi gr. ij.; Ext. Hyoscyami gr. j.; Pulv. Glycyrrhizæ gr. x. M. j. m. n.

The dose of zinc may be increased to five grains.

PULVIS CONTRA RACHITIM.

℞ Ferri Carb. gr. iv.; Rhei Pulv. gr. iij.; Sacch. ℈ ss. M. j. m. n.

PULVIS CONTRA TENIAM.

℞ Scammon gr. xv.; Cambogiæ gr. xij.; Hydr. Subm. gr. x.; Rad. Filicis Maris ʒ j. In doses iij, divide j tertia hora.

PULVIS EXPECTORANS.

℞ Pulv. Ipecac. gr. xxiv.; Pulv. Scillæ gr. xij.; Antim. Tart. gr. j. In ch. xij.—j., 3 in die.

PULVIS HYDR. C. RHEO.

℞ Hydr. Subm. gr. iij.—iv.; Rhei. Pulv. gr. x.; P. Arom. gr. vj.—x. M. Dosis m. n., si opus sit.

In infantile remittent fever, when the infantine dejections are depraved in character, dark brown, and fœtid. Two motions daily are sufficient, and the diet ought to be nutritious, as arrow root, sago, chicken broth, &c.

PULVIS HYDR. C. CRETA ET RHEO.

℞ Hydr. c. Creta, gr. vj.—x.; Rhei Pulv. xv.—xx.; Pulv. Arom. gr. x. M. In ch. vj. j bis in die.

PULVIS JALAPÆ. See PULVIS CATHARTICUS.

PULVIS RHEI C. POTASS S.

℞ Rhei Pulv., Potassæ Sulphatis āā gr. x. M.

In infantile remittent for five successive days, by Fordyce.

PULVIS SECALIS CORNUTI C.

℞ Pulv. Secalis Cornuti ℈ ij.; P. Cubebæ ʒ j.; Pulv. Arom. ʒ j.; Sacch. ʒ j. M. In ch. viij., j ter in die.

In leucorrhœa, blennorrhagia, blenorrhagia.

The dose of the powder, to promote parturient action is ℈ j. every quarter of an hour for three or four doses. The maximum dose is ʒ iss in ordinary cases of parturition. When there is great prostration, this dose may be exceeded.

PULVIS SULPHURIS C.

℞ Sulph. Flor. ʒ ss.; Potassæ Supertart. ʒ j.; Potassæ Nitrat. ʒ ij.; Pulv, Jalapæ ʒ ss.; Pulv. Cinnam. C. ʒ j. Fiat pulvis, cujus sumat coch. parvum omni nocte ex quovis vehiculo.

In psora and hæmorrhoids.

SOLUTIO MORPHIÆ ACETATIS. See ACETAS MORPHIA in the table exhibiting the Medicines in M. Magendie's Formuary at the end of this work.

SOLUTIO MORPHIÆ MURIATIS. See the Table at the end of this work.

SYRUPI. (PH. BRITTANIC.)

There are various syrups in the foreign Pharmacopœiæ for children and adults, which are not in those of this country; but their places are chiefly supplied by sweetning infusions, decoctions, or tinctures.

TINCTURÆ. (PH. BRITTAN.)

TINCTURÆ. (PH. LOND. 1836.)

TINCTURÆ CONII.

℞ Conii Foliorum exsiccatorum ʒ v.; Cardamomi Contusi ʒ j.; Spiritus Tenuioris Oij, Macera per dies quatuordecim, et cola.

TINCTURA CUBEBÆ.

℞ Cubebæ Contritæ ʒ v.; Spiritus Tenuioris Oij. Macera per dies quatuordecim, et cola.

TINCTURA FERRI AMMONIO-CHLORIDI.

℞ Ferri Ammonio-Chloridi ʒ iv.; Spiritus Tenuioris Oj. M.

TINCTURA FERRI SESQUI-CHLORIDI.

℞ Ferri Sesqui-Oxidi ʒ vj.; Acidi Hydrochlorici Oj.; Spiritus Rectificati Oiij. Ferri Sesqui-oxido super infunde et acidum in vase vitreo, et per triduum digere, subinde agitans. Deinde spiritum adjice et cola.

UNGUENTA.—PH. BRITTAN.

UNGUENTUM ACONITINÆ.

℞ Aconitinæ gr. ij.—iv.; Alcholis m. vj.; Adipis ʒ j. M.

UNGUENTUM ANTIMONII POTASSIO-TARTRATIS. (PH. LOND. 1836.)

℞ Antim. Potassio-Tartratis ʒ j; Adipis ʒ iv. Misce.

UNGUENTUM BELLADONNÆ.

℞ Ext. Belladonnæ ʒ ij.; Cerati Simplicis ʒ iv. Misce.

Employed in spasmodic contractions of the urethra and sphincters, and rubbed on painful glandular swellings. In the latter case, ℈ j. of the Potass. Hydriod. or Plumbi Ioduret. may be added with great advantage.

UNGUENTUM BROMATIS POTASSÆ. (MAGENDIE.)

℞ Potassæ Hydrobromatis gr. xxv.; Bromatis Solutionis m. vi.—xij; Adipis ʒ j. Misce.

Employed in frictions to scrofulous engorgements.

UNGUENTUM CREASOTI. (PH. LOND.)

℞ Creasoti ʒ ss.; Adipis ʒ j. M.

UNGUENTUM DEUTO-IODURET. HYDRARG. (MAGENDIE.)

℞ Hydr. Deuto-Iodureti ℈ i; Adipis ʒ iss. Misce.

In cases of syphilitic tubercles and ulcerations, but requires great caution on the part of the practitioner. It might be made weaker at first, and the full quantity finally prescribed.

UNGUENTUM GALLÆ COMPOSITUM.

℞ Gallæ subtilissimæ Contritæ ʒ ij.; Adipis ʒ ij.; Opii Pulv. ʒ ss. Misce.

UNGUENTUM HYDRARGYRI IODIDI. (PH. LOND. 1836.)

UNGUENTUM HYDRARGYRI BINODIDI.

The proportions are, ʒ j.; Ceræ Albæ ʒ ij.; Adipis ʒ vj. Misce.

Unguentum Hydrargyri Ammonio-Chloridi. (Ph. Lond. 1836.)

℞ Hydrarg. Ammonio-Chloridi ʒj.; Adipis ʒiss.

Adipi, lento igne liquefactæ, adjice Hydrargyri Ammonio-Chloridum, et misce.

Unguentum Iodinii Compositum. (Ph. Lond. 1836.)

℞ Iodinii ʒss.; Potassæ Iodidi ʒj.; Spiritûs Rectificati ʒj.; Adipis ʒij. Iodinum et Potassii Iodidum cum Spiritu primum contere, dein adipe, Misce.

Unguentum Hydriodatis Potassæ. (Magendie.)

℞ Potassæ Hydriodatis ʒss.; Adipis ʒiss. M. Fricetur drachma, m. n.

In bronchocele, scrofulous, glandular tumours, and certain engorgements of the testes.

Unguentum Hydriodatis Ferri.

℞ Ferri Hydriod. ʒiss.; Adipis ʒj. M.

Unguentum Iodureti Arsenici. (Magendie.)

℞ Arsenici Iodureti gr. iij.; Adipis ʒj. Misce.

The Ung. Iod. Barii is prepared with gr. iv. to ʒj. of Adeps.

Used in slight scrofulous engorgements. (Biett.)

The Ung. Iod. Plumbi is prepared with ʒj.—ʒj.—ʒi. m. n.

In scrofulous scirrhous tumours, tabes mesenterica, ʒj. of T. Opii may be advantageously added to either, when the skin becomes too quickly reddened.

The Ung. Iod. Sulph. is composed of gr. xxij. to ʒvj. of Adeps.

Unguentum Plumbi Compositum. (Ph. Lond. 1836.)

℞ Cretæ Preparatæ ʒviij.; Aceti Destillatæ ʒvj.; Emplastri Plumbi ℔ iij.; Olei Oj. Emplastrum in Oleo, lento igne liqua, dein Cretam Aceto separatim mistam, effervescentiâ peractâ, paulatim adjice, et assidue move, donec refrixerint.

Unguentum Plumbi Iodii. (Ph. Lond. 1836.)

℞ Plumbi Iodidi ʒj.; Adipis ʒviij. Tere et misce.

Unguenta Iodureta.

℞ Iodinii gr. xij.—xviij.—xix.—ϑj.; Potassæ Hydriod. ϑiv.—ʒij.—ʒiiss. ʒiiss; Adipis prep. ʒij.—ʒij.—ʒij. ʒij. M.

Applied to scrofulous ulcers and tumours, and in hypertrophy of glandular and other organs.

Unguentum Proto-Iodureti. Hydrargyri.

℞ Hydr. Proto-Iodureti ϑj.; Adipis ʒiss. Misce.

Employed in inveterate venereal ulcers and in obstinate enlargements of glandular organs.

The Ung. Id. Zinci is composed of ʒj.—to ʒj. of Adeps.

Unguentum Contra Ophthalmiam Strumosam. (H. of Infants.)

℞ Oxidi Zinci gr. xv.; Hydr. Subm. gr. xij.; Camphoræ gr. viij.; Butyri recentis ʒij.; Butyri Cacao ʒss. M.

About the size of the head of a pin is applied on the eyelids every night at bed time, three times a week.

Unguentum Oxidi. Hydr. Rubri.

℞ Hydr. Oxid. Rubri. Puls. subtilissimi ʒiss.; Adipis ʒiij.; Ceræ Albæ ʒiv. M.

Applied to the eyelids in tarsal inflamation in scrofulous subjects. The ointment of the ioduret of lead may be employed in similar cases.

Unguentum Veratrinæ.

℞ Veratrinæ gr. iv.; Adipis preparat. ʒj. M.

Employed in anasarca, gout, chronic enlargements of the joints after chronic rheumatism. This is the formula of M. Magendie. Dr. Turnbull prescribes ϑj.—ʒj. of adeps; but veratrine has already fallen into disuse in this country, as its efficacy has been greatly overrated.

VINA. PH. BRITTAN.

VINUM FERRI HYDRIODATIS.

℞ Ferri Hpdriodatis ʒ iv.; Vini Burdegaræ Oj. M.—ʒ ss. ʒ indic.

VINUM QUINIÆ.

See the Table of M. Magendie's Formulary at the end.

A TABLE

EXHIBITING THE NAMES AND DOSES OF MEDICINES IN THE LONDON, DUBLIN, AND EDINBURGH PHARMACOPŒIÆ.

DOSES AND PROPORTIONS OF MEDICINES RELATIVE TO THE DIFFERENT AGES.

It is impossible to fix the doses of medicines, as the strength of the constitution varies at the same age in different persons, and will be modified by temperament, sex, habit, idiosyncrasy, season, climate, &c.

Supposing the dose of any medicine to be a drachm for an adult, it is estimated by Gaubius as follows, for children:

Seven weeks, a sixteenth of a drachm.
Seven months, a twelfth.
Two years and four months, a sixth.
Three years and a-half, a fourth.
Five years, a third, or ℈ j.
Seven years, a half, or ʒ ss.
Fourteen, two-thirds, or ℈ ij.

It is prudent in all cases to prescribe rather a diminished than a full dose, as it is much easier to repeat a medicine than to correct its excessive effects. This hint ought to be recollected in cases of infants, as one of two years old may be more developed than another at three or four years.

Abietis resina, used in plaisters.
Abrotani folia, tonic, althelmint. ℈j ʒiss
Absinthium, ... ℈j ad ʒj
Acaciæ gummi, see Mucilag.
Acetosæ folia . . f. ʒss ad f. ʒij
Acetosella . . . f. ʒss ad f. ʒjss
Acetas ferri. D. . . ♏ x ad ♏ xxx
——— hydrargyri. D. E. . gr. i ad vi
Acetum . . . f. ʒj. ad f. ʒss
——— colchici . . f. ʒss ad f. ʒjss
——— scillæ . . f. ʒss ad f. ʒjss
Acidum aceticum dilutum f. ʒj. ad f. ʒss
——— fortius ♏ x ad ♏ xxxx
——— benzoicum . . gr. x ad ʒss
——— citricum . . gr. x ad ʒj
——— muriaticum { ♏ x ad ʒss properly diluted.
——— nitric. dilut. { ♏ x ad ʒss properly diluted.
——— sulph. dilut. { ♏ vi ad ʒss properly diluted.
——— prussicum ♏ ij gradually ad ♏ viii
——— tataricum . . gr. x ad ʒss
Aconiti folia . . . gr. j ad gr. v
Aconitina . . . gr. 1-12 ij
Ærugo . . . gr. ⅛ ad gr. ¼
Æther rectificatus . . f. ʒss ad f. ʒij
———nitrosus . . f. ʒss ad f. ʒij
Alii radix, the juice . f. ʒss ad ʒij
Aloes spicatæ extractum . gr. v ad gr. xv
Althææ folia. See Decoct.
Alumen . . . gr. v ad gr. xv
——— exsiccatum, used externally.
Ammoniæ carbonas . gr. v ad gr. xv
——— murias . gr. x ad ʒss
Ammoniacum . . gr. x ad ʒss
Amygdalæ amaræ, narcotic.
——— dulces, sêe Mist. Amygd.
Anethi semina . . . gr. x ad ʒj
Anisi semina . . . gr. x ad ʒj
Anthemidis flores . . gr. x ad ʒj
Antim. sulphuret. præcip. gr. i ad gr. v
Antim. tartariz. { emetic, gr. i ad gr. iv alterative, gr. ⅛ ad gr. ½
Aqua anethi . .
—— carui . .
—— cinnamoni .
—— fœniculi . .
—— menthæ piperitæ
———viridis .
—— pimentæ . .
—— pulegii . .
} f. ʒj ad f. ʒiv
—— rosæ, used principally in lotions, &c. and to cover the taste of bad medicines.
—— chlorini. D. . f. ʒj. ad ʒij
—— picis liquidæ D. . Oj ad Oij in the course of the day.
—— sulphureti potassæ D m. xx ad f. ʒij
—— supercarbonatas potassæ E. f. ʒviiij three times a day.
—— supercarbonitas sodæ . Oss ad Oj two or three times a day.
Argenti nitras . . gr. ⅛ ad gr. iij
———crystali. D. gr. ⅛ ad gr. j
Armoraciæ radix, ad libitum.
Arnicæ montanæ herba. E gr. v ad gr. x
Arsenicum album sublim. gr. 1-10 ad gr. ¼
Arsari folia, used as an errhine.
Assafœtida gummi resina . gr. v ad ʒss
Aurantii cortex.. see Tinct. Aurantii.

Balsamum Peruvianum . gt. x ad ʒss
——— tolutanum . gt. x ad ℈ij
Belladonnæ folia . gr. ½ ad gr. iij
Benzoinum . . gr. x ad ʒss
Bismuthi trisnitras . gr. v. ad gr. xv
Bistortæ radix . . gr. x ad ʒi

Cajuputi oleum . ♏ ij ad ♏ v
Calami radix . . gr. x ad ʒj
Calamina, used externally.
Calumba . . . gr. x. ad ℈j
Calcii chloridum, vide Solutio.
Calx, see Liq. Calcis.
—— chlorinata.
Cambogia . . . gr ij ad gr. x
Camphora . . . gr. v ad ℈j
Canellæ cortex . . gr. x ad ʒss
Cantharis . . gr. ½ ad gr. iij
Cancrorum lapilli . . ʒss ad ʒj
Capsici baccæ . . gr. v ad gr.xjj
Carbo ligni . . . gr. x ad ℈j
Cardamines flores . . ʒj ad ʒij
Cardamomi semina . gr. x ad ℈j
Caricæ fructus, ad libitum.
Carui semina . . gr. x ad ʒj
Caryophylli . . gr. v ad gr. x
Caryophyllorum oleum . ♏ ij ad ♏ v
Cascarilla cortex . . gr. x ad ʒss
Cassiæ pulpa . . . ʒss ad ʒj
Castoreum . . . gr. x ad ʒss
Catechu extractum . gr. x ad ℈j
Centaurii cacumina . gr. xv ad ℈j
Contaureæ bened. herba, E. gr. xv ad ʒj
Cetaceum . . . ℈j ad ʒjss
Cinchonæ cordifoliæ cortex gr. x ad ʒiij
———— lancifoliæ . gr. x ad ʒiij
———— oblongifoliæ . gr. x ad ʒiij
Cinnamomi cortex . gr. v ad ℈j
———-- oleum . ♏ j ad ♏ iij
Chloridum calicis et sodæ, see Form.
Chloridum zinci, an escharotic.
Coccus, used for colouring medicines.
Colchici radix et semina. gr. j ad gr. vj
Colocynthidis pulpa . gr. j ad gr. v
Confectio amygdalarum, used for making the emulsion.
———— aromatica . gr. x ad ʒj
———— aurantiorum . ʒj ad ℥j
———— cassiæ . . ʒj ad ℥j
———— opii . . gr. x ad ʒss
———— piperis nigri . ʒj ad ʒij
———— rosæ gallicæ . ʒj ad ℥j
———— rutæ, used in clysters ℈j—ʒj
———— scammoniæ . ℈j ad ʒj
———— sennæ . . ʒj ad ℥j
Conii folia et semina . gr. ij ad ℈j
Contrayervæ radix . . gr. x ad ʒss
Copaiba . . ♎ x ad ʒj
Coriandri semina . . ℈j ad ʒj
Cornu ustum . . ʒss ad ʒij
Creta . . . ℈j ad ℈ij
Croci stigmata . . gr. v ad ʒss
Cubeba . . . ʒj ad ʒiij
Cumini semina . . ℈j ad ʒj
Cuprum ammoniatum gr. ¼ ad gr. v
Cupri sulphas . . gr. ¼ ad gr. 1½
—— acetas. D. . gr. ½ ad gr. ij
Curcumæ longæ radix. D. ʒss ad ʒij
Cuspariæ cortex . . gr. vj. ad ℈j
Cydoniæ semina, see Decoct.

Daturæ stramonii herb. et sem. gr. i ad viij
Dauci semina . . ℈j ad ʒj
Decoctum aloes comp. . f.ʒss ad f.ʒij
———— althææ officinalis, ad libitum.
———— cinchonæ . f ʒj ad f.ʒiv
———— cydoniæ . f.ʒj ad f.ʒiv
———— daphnes mezerei f.ʒiij ad f.ʒvj
———— dulcamaræ . f.ʒss ad f.ʒj
———— hordei . f.ʒiv ad Oss
———— geoffrææ . f.ʒss ad f ʒij
———— hordei comp. f.ʒiv ad Oss
———— glycyrrhizæ, ad libitum.
———— guaiaci comp f.ʒiij ad f.ʒvi
———— lichenis . f.ʒj ad f.ʒiv
———— hæmatoxyli f.ʒj ad f.ʒiij
———— malvæ comp., used in clysters.
———— papaveris, used for anodyne fomentation.
———— pyrolæ. D. . f.ʒj ad f.ʒij
———— quercus, used in injections.
———— sarsaparillæ f.ʒiv ad Oss
———————— comp. f.ʒiv ad Oss
———— sennæ . f.ʒss ad f.ʒiij
———— senegæ . f.ʒss ad f.ʒij
———— tartaxici . f.ʒj ad f.ʒij
———— ulmi . f.ʒiv ad Oss
———— veratri, applied externally.
Digitalis foliæ et semina gr. ss. ad gr. iij
Diosmæ crenatæ. gr. v ad ℈j
Dolichi pubes . . gr. v. ad gr. x
Dulcamaræ cauliss, see Decoct.

Elaterii peaones, see Extract
Electuarium catechu comp. ℈j ad ʒj
Emplastra, see Formulæ
Ergota, Ph. Lond. vide Secale cornutum.
Euphorbiæ gummi resinæ, used externally.
Extractum aconiti, gr. i ad gr. v
———— aloes purif., gr. v ad gr. xv
———— artemisiæ absinthii, gr. x ad ℈j
———— anthemidis, gr. x ad ʒj
———— belladonæ, gr. i ad gr. v
———— cinchonæ, gr. x ad ʒss
————————resinosum, gr. x ad ʒss
———— colcynthidis, gr. v ad ʒss
———————— comp. gr. v ad ʒss
———— conii . . gr. v ad ℈j
———— elaterii, . . gr. ½ ad gr ij
———— gentianæ . gr. x ad ʒss
———— glycyrrhizæ, ad libitum
———— hæmatoxyli, . gr. x ad ʒss
———— radicis hellebori nig. gr. x ad ℈j
———— humuli, . . gr. v ad ℈j
———— hyoscyami . gr. v ad ℈j
———— jalapæ . . gr x ad ℈j
———— lactucæ . . gr. x ad ℈j
———— nucis vomicæ gr. ¼ ad gr. ½
———— opii . . gr. ½ ad gr. v
———— papaveris . gr. ij ad ℈j
———— rhei, . . gr. x ad ʒss

Extractum sarsaparillæ, . gr. x ad ʒj
——— sarsaparillæ fluid f.ʒij ad f.ʒiv
——— rutæ graveolentis, gr. x ad ℈j
——— spartii scoparii, ʒss ad ʒj
——— stramonii, . gr. ¼ ad gr ij
——— taraxaci, . gr. x ad ℈ij
Emulsio acaciæ Arabaicæ, ad libitum.
——— camphoræ. E . f.ʒss ad f.ʒij

Ferrum . . . gr. x ad ʒss
Ferri acetas. D. . gr. iv ad gr. xij
—— ammoniatum . gr. x ad gr. xv
—— oxydum nigrum. D. gr. v ad ʒj
—— subcarbonas . gr. iij ad ℈j
—— sulphas . . gr. j ad gr. v.
—— rubigo . . gr. v ad ʒss
—— tartarizatum . gr. x ad ʒss
Filicis radix . . . ʒj ad ʒss
Fœniculi semina . . ℈j ad ʒj

Galbani gummi resina . gr. x ad ʒss
Gallæ . . . gr. x ad ℈j
Gentianæ radix . . gr. x ad ʒj
Geoffræ inermis cortex .. ℈j ad ℈ij
Geum urbanum radix . ʒss ad ʒj
Glycyrrhizæ radix . . ʒss ad ʒj
Granati cortex . . ℈j ad ʒj
Gratiolæ officinalis herba . gr. x
Guaiaci resinæ . . gr. x ʒss
——— lignum, see Decoct.

Hæmatoxyli lignum, see Decoct.
Helenium . . . ʒss ad ʒj
Hellebori fœtidi folia . gr. x ad ʒss
——— nigri radix . gr. x ad ℈j
Hordei semina, see Decoct.
Humuli strobuli . gr. x ad ʒss
Hydrargyri nitrico oxydum, applied ext.
——— oxydum cinereum gr. j ad iij
——— nig. D. gr. viij ad ℈j
——— rubrum gr. ⅛ ad gr. j
——— oxymurias . gr. ⅛ ad ½
——— submurias gr. v ad gr. xv
——— sulphuretum rub. gr. x ad ʒss
——— nig. gr. v ad ʒss
——— cum creta gr. x ad ʒss
——— præcipitat. album, used ext.
Hydrargyrum purificatum ʒss ad ʒj
Hydroidas potassæ. D. . gr. v ad gr. xv
Hydrosulphuretum ammoniæ ♏v ad ♏xv
Hyoscyami folia et semina gr. iij ad gr. x
Hyssopus officinalis herba. E. ℈j ad ʒj

Ilicina . . . . gr. vj ad xxiv
Infusum anthemidis
——— armoraciæ comp.
——— aurantii comp.
——— calumbæ
——— caryophyllorum } f.ʒj ad ʒiij
——— cascarillæ
——— catechu comp.
——— cinchonæ
——— cuspariæ

Infusum digitalis . f.ʒss ad ʒiss
——— gentianæ comp. . f.ʒj ad ʒiij
——— lini comp., ad libitum
——— quassiæ
——— rhei
——— rosæ comp. } f.ʒij ad ʒiv
——— sennæ comp.
——— simaroubæ . f.ʒij ad ʒiv
——— valerianæ. D. f.ʒjss ad ʒij
Iodinium, gr. ⅛ ad gr. iv.
Ipecacuanhæ radix { expec. gr. ½ ad iss / emetic gr. x ad ʒss

Jalapæ radix . . gr. x ad ʒss
Juniperi baccæ et cacumina ʒss ad ʒj

Kino . . . gr. x ad ʒss
Krameriæ radix . . ℈j ad ℈ij

Lauri cassiæ cortex . gr. v ad ℈j
—— baccæ et foliæ . gr. x ad ʒss
Lavandulæ flores . . ℈j ad ʒj
Lichen . . . . ℈j ad ʒj
Limonum cortex
Linum catharticum . ʒss ad ʒj
Liquor ammoniæ { ♏ x ad ♏ xx diluted
——— acetatis f.ʒij ad f.ʒj
——— subcarb. f.ʒss ad f.ʒj
——— argenti nitratis ʒj aq. ʒj
——— barii chloridi ♏ij ad x
——— calcii chloridi ♏xx ad ʒj
——— arsenicalis . ♏ iij ad ♏ xl
——— calcis . f.ʒiss ad f. Oss
——— muriatis { f.♏ xx ad f.ʒj diluted
——— ferri alkalini . f.ʒss ad f.ʒj
——— hydrargyri oxymuriatis f.ʒj ad ʒiv
——— opii sedativus .. ♏ xv ad ʒss
——— potassæ . . ♏ x ad ʒss
——— subcarb. ♏ x ad ʒss
——— tartari emetici { ♏ ij ad ʒj as a diaphoretic. / ʒss ad ʒiij as an emetic.
Lobeliæ tinctura . . ʒss ad ʒij

Magnesia . . . ʒss ad ʒj
——— subcarb. . . ʒss ad ʒij
——— sulphas . ʒii ad ʒiss
Malva, see Decoction.
Manna . . . . ʒij ad ʒij
Marrubium . . ʒss ad ʒij
Mastiche . . . gr. x ad ʒss
Mel boracis, used in apthous affections of the mouth.
—— despumatum . . ʒij ad ʒij
—— rosæ, used in gargles.
Mentha piperita . . gr. x ad ʒj
——— viridis . . gr. x ad ʒj
Menyanthes . . ʒiss ad ʒij
Mezerei cortex, used in making decoct. sarsaparilla.

Mist. ammoniaci . f.ʒiv ad f.ʒj
—— amygdalarum . f.ʒij ad f.ʒiv
—— asafœtidæ . f.ʒss ad ad f.ʒiss
—— camphoræ . f.ʒss ad f.ʒiss
—— cretæ . . f.ʒj ad f.ʒij
—— ferri comp. . f.ʒj ad f.ʒij
—— guaïaci . . f.ʒss ad f.ʒij
—— moschi . . f.ʒss ad f-ʒij
Morphia . . . gr ⅛—ij
Moschus . . . gr. v ad ℈j
Mucilago acaciæ . . f ʒj ad ʒjss
———— amyli, used for clyster.
Myristicæ nuclei . gr. v ad ℈j
Myrrha . . . gr. x ad ʒj

Oleum amygdalarum . f.ʒiij ad f.ʒj
——— anisi . . ♏ v ad ♏ x
——— anthemidis . ♏ v ad ♏ x
——— carui . ♏ j ad ♏ v
——— fœniculi dulcis. D. ♏ x ad ♏ xx
——— juniperi . . ♏ iij ad ♏ x
——— lavendulæ . ♏ j ad ♏ v
——— lini . . f.ʒij sd f.ʒiv
——— volatile lauri sassaf. E ♏ ij ad ♏x
——— menthæ piperitæ ♏ i ad ♏ iij
———————— viridis ♏ iij ad ♏ v
——— origani . ♏ i ad ♏ ij
——— pimentæ . ♏ iij ad ♏ v
——— pulegii . . ♏j ad ♏ vi
——— ricini . . f.ʒss ad f.ʒj
——— rosmarani . ♏ ij ad ♏v
——— succini . . ♏ x ad ʒss
——— sulphuratum . ♏ x ad ʒss
——— terebinthinæ rect. ♏x ad ʒij
Olibanum . . . gr. x ad ʒss
Olivæ oleum . . f.ʒij ad ʒv
Opium, . . . gr. ½ ad gr. iv
Opopanax . . gr. x ad ʒss
Origanum, . . . ℈j ad ʒj
Oxymel simplex, . . f.ʒj ad f.ʒj
———- scillæ, . . f.ʒss ad ʒij
———- colchici, . . f.ʒj ad f.ʒj

Papav. capsulæ.
Pariera infus, ʒvj—Aq. Oj—ʒi—iij
Petroleum, . . . gr. x ad ʒss
Pilulæ aloes comp., . . gr. x ad ℈j
———————— cum myrrha gr. x ad ℈j
———————— et asafœtidæ, gr. x ad ℈j
——— asafœtidæ com., . gr. x ad ℈j
——— colocynthidis comp., gr. viij ad ℈j
——— galbani comp., . gr. x ad ℈i
——— cambogiæ comp., . gr. x ad ℈j
——— ferri comp., . . gr. ad ℈j
——— hydrargyri, . gr. v ad gr. x
———————submuriatis } gr. v ad gr. x
———————compositæ }
——— rhei comp., . . gr. x ad ℈j
——— saponis cum opio, gr. iij ad gr. x
——— E. styrace, . . gr. iij ad gr. x
——— scillæ comp., . . gr. x ad ℈j
Pimentæ baccæ, . . gr. v ad ℈ij

Piperina, in pills only, . . gr. v—x
Piperis longi fructus, . gr. v ad ℈j
——— nigri baccæ, . gr. v ad ℈j
———————— confectio, . gr. v ad ʒj
———————— cubeba—*vide* cubeba.
———————— tinct.ʒv—Sp.Oij—ʒss—ʒiss
Pix abietina, used externally.
—— liquida, used externally.
Plumbi subearbonas, used externally.
——— acetas, . . . gr. ss ad gr. ij
Porri radix, . . . f.ʒj ad f.ʒss
Potassa fusa, } escharotics.
——— cum calce, }
——— acetas, . . ℈j ad ℈ij
——— carbonas, . gr. x ad ʒss
——— nitras, . . gr. x ad ʒss
——— subcarbonas, . gr. x ad ʒss
——— sulphas, . . ʒj ad ʒss
——— sulphuretum, . gr. v ad gr. xv
——— supersulphas, . ʒss ad ʒij
——— supertartras, . ʒj ad ʒj
——— tartras, . . ʒj ad ʒj
Pterocarpi lig. used for colouring tincts.
Pulegium, . . . gr. x ad ʒj
Pulvis aloes comp., . gr. x ad ℈j
——— antimonialis, . gr. v ad gr. x
——— cinnamomi comp., gr. v ad gr. x
——— contrajervæ comp., gr. xv ad ℈ij
——— cornu usti cum opio, gr. v ad gr. x
——— cretæ comp., . . ʒss ad ʒj
———————- opio, . ℈j ad ℈ij
——— ipecacuanha comp., gr. v ad ℈j
——— kino comp., . . gr. v ad ℈j
——— scammoneæ comp., gr. viij—xv
——— sennæ comp., . . ℈j ad ʒj
——— tragacanthæ comp., gr. x ad ʒj
Pyrethri radix, . gr. iij ad gr. x

Quassiæ lignum, . gr. v ad ʒss
Quercis cortex, . . gr. x ad ʒss

Rhamni baccæ, see Syrup.
Rhei radix, . . . gr. x ad ʒss
Rhædos petala, see Syrup.
Rosæ caninæ pulpa, see Confectio.
—— centifoliæ petala, see Syrup.
—— gallicæ petala, see Syrup.
Rosmarini cacumina, . gr. x ad ʒss
Rubiæ radix, . . . ʒss ad ʒj
Rutæ folia, . . . gr. xv ad ℈ij

Sabinæ folia, . . gr. v ad gr. x
Sagapenum, . . gr. x ad ʒss
Salacina, . . . gr. ij—xxx
Salicis cortex, . . . ℈j ad ʒj
Sambuci flores, in fomentations.
Sapo durus, . . . gr. v ad ʒss
Sarsaparillæ radix, . . ℈j ad ʒj
Sassafras lignum et radix, . ℈j ad ʒj
Scammoneæ gum. resinæ, gr. v ad gr. xv

(To be continued.)

FIRST GENERAL MEETING OF THE BRITISH MEDICAL ASSOCIATION AT EXETER HALL.

Yesterday evening a most numerous and highly respectable meeting took place at Exeter Hall for the purpose of considering the laws drawn up by the Provisional Council of the British Medical Association, Dr. G. Webster, of Dulwich, presided. Amongst the gentlemen present, we observed Drs. Johnson, A, T. Thomson, Chowne, Messrs. Lucas, Davidson, &c. &c.

Dr. Webster apologized for the situation which he held, but as he had presided at a dinner at which the Association was formed, he had been honoured by being placed in the chair on this occasion. Before proceeding with the address he wished to read the names of those gentlemen who had been elected on the council, and it was for the meeting to annul or ratify that election. The names of the council were now read, which, with the laws which have been drawn up for the guidance of the society, we shall publish next week, when we shall devote some space to the consideration of the objects and advantages of the association.

A note was read from Mr. Liston, expressive of his cordial wishes for the success of the Association, and requesting to be enrolled a member.

Dr. Webster now proceeded to read his address. The profession, he said, was in a bad state from various causes, the chief of which was the apathy of the members in respect to their rights and liberties; grievances had gone on for a long period of years, and instead of uniting and attempting to remove them, the members of the profession had tamely submitted to oppressions. One or two attempts it was true, had been made to form an association, but a little loss of time and money had damped the ardour of those who had made them, and they had ingloriously abandoned the cause of Medical Reform.

One of the chief grievances that the mass of the profession laboured under was the unjust and invidious distinction made between its members, by the three existing divisions of practitioners. These distinctions were not kept up according to the laws of the colleges, even by the governors of those colleges themselves; in fact, the distinctions had been made in far different days from the present, when they were antiquated and not fitted for the improved state of the profession. The corporate bodies had not in any way advanced Medical Science, but had rather been clogs upon the wheels of improvement. Look at the College of Physicians, and its unjust laws regarding fellows and licentiates; the universities only could qualify an individual for the obtainment of a fellowship, unless, indeed, as sometimes occurred, a licentiate was admitted into the governing body by the favour and votes of the fellows. The universities, it was known, had never taught medicine well, nor was it probable that they ever would, from their want of hospitals and other necessary aids of medical education. The election of a licentiate to the fellowship by the favour of the fellows, opened a wide field for intrigue and obsequiousness. The licentiates were inferior men, not fitted to hold any appointments! nor to have a voice in the affairs of their college; there were 113 fellows, 60 of whom resided in London; the licentiates amounted to 274, 141 of whom lived in the metropolis, and the majority of the licentiates had no voice in the government of their college. The College of Surgeons was worse than that of the Physicians, here there was a council of 21, self-elected for life, yet the 20,000 members possessed no power over the affairs of the college, nor in the election of their governors. All members in general practice were excluded from the governing body, the only eligible persons to which were about 100 *pures* in London!

There were about the same number of *pures* in the country, but these were not eligible. Any one of those who, from their practising *pure* surgery in London, were eligible, might be passed over by the council, if they thought fit to do so, from any objection they might have to the principles of such individuals, unless, indeed, he turned traitor to those principles, and was rewarded by a seat among the governing body (cheers.)—The Company of Apothecaries had the extraordinary power which they possess thrust upon them by the jealousies of the other corporations. This power the apothecaries acknowledge they had not prepared their minds to receive, and it came on them unexpectedly, as well indeed it might. (Cheers.) To remedy the many abuses which sprung out of the present misgovernment by the corporate bodies, the three corporations should be comprehended in one faculty of medicine, the members of which should have power to elect their senators. Without such a step being taken

the abuses must proceed. There should be no favouritism shewn to particular schools, except the favouritism of science, the hospitals should be purified, and the officers of them elected from the talent of the great map of the profession. None of the colleges had attempted to put down quacking, which had arisen to a fearful height. Were the members of the profession at large to unite and stand firm together, they would be able to repel such attacks upon them, as also the disgraceful insults and injuries inflicted on them by Poor Law Commissioners and their deputies' deputies. (cheers.) The association was not formed on any selfish view, but for the good of the whole profession; it was not designed at present to be literary or scientific, or to publish transactions, which might perhaps be necessary in provincial associations, the country not affording the opportunities of London, for the frequent meeting of medical men at societies. The British Medical Association was to transact the business of the profession, this it would be able effectually to do from its central situation. The provincial associations could not from their distance from town so well accomplish this object, they could, however, do much by contributing to the funds, and by forwarding information regarding the progress of Poor Law schemes, &c. His Majesty's ministers were inclined to afford relief to the profession; the Medical Committee he believed was shortly to be called again, and would be open to fresh and further evidence; the support ministers had given to Mr. Wakley in carrying the Medical Witnesses' Bill, and the promise given by Lord John Russell to that gentleman to institute an inquiry into the Poor Law regulations respecting the profession might also be mentioned. (cheers.) The New University, the whole arrangements of which, he (Dr. W.) did not agree with, had nevertheless been established on a good principle, Did it posses a power of granting the various kinds of degrees, it would do much to overthrow the other colleges.

A Court of Honor had been much wanted, this association intended to form one, to which all professional disputes might be referred. It was also intended to form a fund for the relief of distressed medical men or their families when left destitute: it was known medical men generally died poor, and left their families in distress. This fund would relieve such distress, whether occurring to the members of the association or otherwise. (Much cheering).

The Secretary now read the laws and regulations which we shall give in full next week; they embrace many points of interest. We are sorry that want of space, and the late period of the meeting, prevent our doing full justice to it. Several gentlemen addressed the chair.

Dr. Johnson objected to one of the laws, which makes it incumbent on the members of the council to be or to have been general practitioners; he thought the exclusion of physicians and surgeons invidious.

The Chairman answered, that the physicians if represented in the council, could not claim more than one, and the pure surgeons about three-quarters of a representative, the limited number of the council and the great number of general practitioners required such limitation. He should have no objection to admit such a number of physicians and *pures*.

Dr. Thomson objected to the strong language in which the address was couched, and thought the association should first institute inquiries into the state of the profession, and then remonstrate with the corporate bodies. The Apothecaries' Company had done much good, and raised the character of the general practitioner. (No! No!)

Mr. Meade denied that any of the corporations had done any thing towards raising the character of the profession---the Apothecaries had never prosecuted quacks, but had occasionally persecuted talented members of other colleges.

Dr. Webster said it was the Apothecaries *Act*, and not the *Company* which had conferred benefit on the profession. Had proper men formed the government of the society, how much more might have been done.

Several other gentlemen addressed the meeting.

Dr. Murray, though now he had left the medical profession and joined another, felt so convinced of the usefulness of the association, that he requested to be enrolled a member Mr. Boddy supported the address, which it was proposed and carried unanimously should be printed for circulation in the profession.

The meeting afterwards adjourned several gentlemen having put their names down as members.

ROYAL INFIRMARY

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NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. VII.

Flow of Arterial Blood.

Theory of the Pulse.—Objection to considering it as Active.—Pulse in dead Animals.—Experiments on Transfusion.—Analogy betwen the Urethra and an Artery.—Theories of Arterial and Capillary Attraction.—Spontaneous Motion of the Blood; Rate of Circulation in the Aorta and Capillaries.—Transmission of Fluid through a Conical Pipe.—The arteries not Conical, but Cylindrical.—The Circulatory Cone.—Cause of Hæmorhage and Inflammation after operations.—The Capillaries not Conduit-pipes, but Reservoirs.—Effect of Small and Large Angles in the Branches of Arteries.—Effect of Sudden Turns in Water-Pipes.—The Arteries always Full.—Passage of Fluid through a Spiral Pipe.—Circulation in Tortuous Arteries.—The Arteries Tortuous in the Uterus and the Testicles.—Different Explanations of the Tortuosities of the Arteries.—Longitudinal Hypertrophy of the Arterial Coats.—Vasa Vasorum of the Arteries.—Hypertrophy of the Bladder, not from Increased Action.—Tortuosity of the Lactiferous Ducts of the Mamma; of Varicose Veins; and of the Thoracic Ducts.—Anastamosis of Arteries.—Obliteration of the Aorta.—Dry Gangrene.—Average Quantity of Blood in Different Organs.—Circulation of Blood in the Veins.—Circulation in the Pulmonary Arteries and Veins.—Quantity of Blood passing through the Brain, and the Kidneys.—No determination of Blood in the Body.—Effect of Diuretics Medicines.—Secretion of Nutrition.—Meaning of Parenchyma, Follicles, and Crypts.—Terminations of Arteries in Veins. Crypts, Lymphatics, Cells, and Exhalents.—Observations of Ruysch, Malpighi, and Lewenhock.—Structure and Muscularity of Glands.—Opinions of Magendie and Beclard.—Actions of the Capillaries in Blushing.—Proof of the Capillaries being Muscular.—Muscles in Vessels smaller than a Hair in the Limbs of a Flea; and of the Whiskers of Animalculæ.—Difference between Nutrition and Secretion.—Stimulus to these Functions.—Affected by the Passions, but not by the Will.—Cause of Secreting Parts being more Vascular.—Ancient Opinions respecting Blood, Yellow Bile, Black Bile, and Phlegm.—Absorbed Semen.—Sanguineous and Spermatic Parts.—Lymph, Tears, and Milk,—Mathematical and Chemical Physiologists.—Galvanic Theory of Secretions.—Cause of the Vitiated State of the Secretions in Sleep and Apoplexy.—Cause of Growth and Decay.—Deposition of Solids.—Nails and Hair do not Grow.—Formation of a Tissue.—Ultimate Anatomical Particles.—Coagulable Lymph.—The Periosteum does not secrete Bone.—Vis Plastica.—Unity of Organization.—Frank, Cuvier, Carus, Meckel, and St. Hillaire.—Analogy between the different Bones of the Body.—Analogy between the Soft Parts.—Analogy between an Arm and a Wing; between a Leg and a Fin; between the Lower Jaw and the Ribs;—and between the Genital Organs in the Two Sexes.—Both Sexes Female at a certain period.—Reputed Hermaphroditism.—Resemblance of Diseases in the Two Sexes.—Removal of Lost Parts.—Inorganic Tissue of the Body, Cuticle, Hair, Nails, and Teeth.—Disposition of Liquids.—Perspirable, Follicular, and Glandular Secretions.—Crude, Mature, and Secreted Fluids.—Right and Wrong Way of Describing a Gland.—Hepatitis.—Different Seat of Nephritis and Diuresis; and of an Augmented and Diminished Secretion of Urine.—Two different kinds of Glandular Inflammation.—The Lungs a Conglomerate Gland.—Difference between Bronchitis and Puenamonia.—Arrangement of the Liquid Secretions.—Gastric

and Menstrual Fluid; Humours of the Eye and Ear; Fat, Sweat, Marrow, Synovia, Mucilage, Feces, Meibomian Fluid, Cerumen, Sebaceous Matter, Tears, Saliva, Pancreatic Fluid, Urine, Semen, and Milk.—Daily Quantity of Urine Secreted, and Nutriment Received.—Secretion and Excretion of Feces and Urine.—Secretion of Mucilage.—Extent of the Mucous Tissue.—Impropriety of Blowing the Nose.—Roman Laws on the Subject.—Vicarious Discharge of Fluids.—Increased Irritation produces Diminished Secretion.—Deposition of Aeriform Fluids.—Cause of Unpleasant Breath.—Difference between Hepatic and Cystic Bile.—Secretion of Musk and Ambergris.

The pulse must be regarded as the *passive* dilatation of the arteries, and results from the injection of two ounces of fresh blood. A decisive objection to considering it as *active* is drawn from the fact, that a pulse may be created in the arteries of a dead animal, by connecting them with those of a living one. I had a good opportunity of observing this in some experiments on transfusion. The medium of connection was the ureter of an ox, and in this ureter the pulse was as strong as in the arteries of the living animal. The urethra is the part which bears the greatest analogy to an artery.

It has been thought by some that the circulation is assisted by the attraction of the blood by the sides of the arteries, or by the attraction of the capillaries, or by some spontaneous motion of the blood itself. If the force of a liquid flowing in one tube be imparted to that in two oblique ones, half the force is given to each. Hence, if the collective calibre of the capillaries be five hundred times that of the aorta, the celerity of the blood in the former will be diminished in the same proportion. If the blood flows through the aorta at the rate of four inches in a second, it must flow through the capillaries at the rate of a hundred and twenty-fifth part of an inch in a second; although Bichat says the blood in the capillaries moves as as rapidly as in the aorta.

It is said that a conical pipe will transmit more liquid than a cylindrical one, which is attributed to the particles in the latter case, which are before, impeding those which are behind. The arteries, however, are not conical, but a collection of cylinders. But as the collective capacity of the arteries increases as we recede from the heart, the whole quantity of blood in the arterial system represents a cone, the apex of which is the aorta, and its base the capillaries. If we diminish the base of this cone by one fourth, as in the amputation of the thigh at the hip-joint, if as much blood passes through the aorta as before it must be transmitted by three-fourths of the capillaries in the same time as it was by the whole, and therefore with greater velocity. From this greater activity of the capillaries results the tendency to hæmorrhage, and to inflammation after operations. The capillary arteries, and the radicles of the veins, act not only as conduit-pipes, but as reservoirs.

There is no doubt that the middle of the stream of blood flows more quickly than the circumference; owing to the friction of the latter against the side of the vessel. It was once thought that the blood flowed more rapidly through the branches which come off at a *small* angle, than through those which are given off at a *right* angle, or which take a retrograde course. It is well known that water flowing through a pipe, is impeded by sudden turns in the latter; and if one pipe be fixed into another in a direction opposite to the stream, no water flows into the lateral pipe. Hence it was said that the renal arteries, which come off at right angles, receive less blood than other branches. But the analogy does not hold good; because the arteries are always distended, and as full as they can hold. You add more at the expense of dilatation; and as a fluid presses equally in all directions, there is little doubt that all the branches equally receive the impulse. From not attending to this consideration, and from observing that water flows from a reservoir more slowly through a spiral pipe, it has been concluded that in a tortuous artery, the course of the blood is slower. But in this case the resistance is chiefly from the sides of the pipe; while in the instance of the arteries, the impediment is chiefly from the column of blood already in the vessels. As the arteries, however, are not rigid and unyielding, but expansible the tendeney of the blood injected is to produce a right line; and thus a small portion, but *only* a small portion, of the force may be lost. Charles Bell, and all the advocates of the muscularity of the arteries, maintain that the circulation in tortuous arteries is *quicker* than in others.

It is likewise maintained by Charles Bell, that where the design is to diminish the force of the circulation, the arteries are subdivided and again gathered into

trunk. In cases where the blood goes in greater quantity to particular parts at particular times, it is supposed that the arteries become tortuous; as in the uterus during pregnancy, and the testicles in the rutting season. I do not think, however, that tortuous arteries can transmit more blood than straight ones; for the quantity of their contents must depend on the bore. I think the tortuosity of the arteries, is the consequence of something already *done*, and not the cause of anything *to do*. Parry explains it in this way. The retention of blood in the part causes an obstruction, which causes the pulsation to become more violent; and this gives rise to the tortuosity. I think it is from longitudinal hypertrophy of the coats of the arteries, from the action of their *vasa vasorum*. In every case in which organs are gorged with their natural contents, they become hypertrophied; as is seen in the bladder. It is generally thought the latter is owing to the increased action of the muscular coat, from increased resistance; but *all* the coats are hypertrophied as well as the *muscular*. The ducts of the mamma which convey the milk, become more tortuous during lactation; not for the sake of transmitting their contents more quickly or more slowly; but in consequence of hypertrophy from retention of the milk. The veins, when varicose, become more tortuous, not to serve any purpose, but as the result of hypertrophy. The same may be observed of the tortuous thoracic duct.

In consequence of the anastamosis of different vessels, almost any artery may be impeded without giving rise to serious consequences; and there are several examples of obstruction, more or less complete, of the aorta. The smaller arteries, however, can bear obliteration less than a large one; and this, probably, is the cause of dry gangrene.

The sole cause which determines the quantity of blood sent to any part, is the bore of its artery; and this generally bears the same proportion to the aorta, as the weight of the organ does to that of the whole body. This, however, does not uniformly take place. The brain, for instance, seems to have five times the quantity of blood of the average of other organs. It has been said that it is not more vascular than other organs, nor the circulation more rapid. But it is forgotten that the arteries and veins are not continuous vessels of equal bore. If a large artery divides into a few branches, the circulation will be more rapid; if into many, the part it supplies will be more vascular. It appears that the brain is either five times as vascular as the average of other organs; or that the blood circulates in it five times as rapidly; or that the effect is divided between two causes. It is the same with other organs which receive much blood in proportion to their size. The circulation is most rapid in the pulmonary veins, and next in the pulmonary arteries. Eighteen hundred pounds of blood pass through the brain in twenty-four hours; which amounts to twelve pounds in a minute. The kidneys probably transmit four hundred and fifty pounds daily. All this tends to throw doubt on the common cant about "increased determination." Is it necessary for a diuretic medicine to send *more* blood to the kidneys? As if from four hundred and fifty pounds, they could not spare six ounces for increased secretion.

SECRETION AND NUTRITION.

The transmission of blood through the large arteries, is only useful as leading to the smaller ones. It was formerly thought that a spongy parenchyma was interposed between the terminations of the arteries and those of veins. The term "*parenchyma*," was made by Malpighi to mean *crypts*, or *follicles* in glands; and this sense it has retained to the present day. Ruysch made one termination of arteries to be in cells, Lewenhoek said that some terminated in exhalents. Hence there are reckoned five terminations of arteries. 1. In the radicles of *veins*. 2. In *cryptæ*. 3. In the radicles of *lymphatics*. 4. In erectile *cells*. 5. In *exhalents*. Of these probably the first and third only are correct. Ruysch, by the aid of his glasses, shewed that *cryptæ* are only fine ramifications of vessels;—pencils, as it were, of the rays of arteries, meeting similar ones from veins.

Glands are very vascular. If minutely injected, their whole mass appears to be composed chiefly of vessels. Magendie, Beclard, and others, have made a new tissue, which they call *erectile;* but what they regard as *cells*, are only *vessels* cut across. No one but Lewenhoek has seen exhalents; although many have *inferred* their existence. Adelon has fully investigated this subject. Perenchyma is now understood to mean a net-work of the extremities of arteries, veins, and lymphatics, connected by cellular tissue. It was once understood to mean a sponge; and by Malpighi, a collection of *acini*.

The particular action of capillaries in differents parts, as in blushing, &c. shew the capillaries to be muscular. It has been said, that it is conceivable that vessels smaller than a hair should have a muscular coat; but it is not more wonderful than that the limbs of a flea should be moved by muscles; and the flea is a perfect leviathan, compared to the numerous animalculæ in different fluids, each of the whiskers of which is probably moved by the muscles.

The sum of the power given at the apex of the cone which the circulating system represents, must be felt at the base. If a row of balls surrounded the earth at the equator, an impulse given at one end would be communicated to the other end undiminished. It has been shewn that if the heart be cut out, the capillaries will act; but that they send the blood back through the arteries as forward into the veins. The course of blood in the capillaries is described by Adelon as oscillating, sometimes retrograding, and as being different in all the parts of the body. Hence we may conclude that the capillaries do not assist in propelling the blood, so that the muscularity of the capillaries are not designed for *circulation*, (as Bichat thought), but for *secretion* and *nutrition*. The difference between these two functions is, that the former is generally applied to *solid*, and the *latter* to *liquid* deposits.

The stimulus to these functions is the presence of blood, combined with a permanent influence from the brain. Therefore they are not affected by the *will*, though it is by the *passions*. Secreting parts are more vascular, because they *retain* more blood, not because they *receive* more. No difference is observed between the blood which goes to the stomach, and that which goes to the kidneys. The ancients thought there were only four fluids in the body, and that these were obtained from the blood, and were attracted to different parts of the body. The fluids were blood, *yellow* bile, *black* bile, and phlegm, which were respectively attracted to the heart, liver, spleen, &c. Before the time of Harvey it was thought that some parts were furnished with blood, and others with absorbed semen, so that they were divided into *sanguincous* and *spermatic*. When the lymph was discovered, it was considered to form tears, the milk, the semen, &c.

The mathematical physiologists thought that the secretions were produced by the blood being strained through apertures of different sizes. Then arose the chemists; but what they said amounted only to the fact, that new productions are formed; but *how* they are formed they could not tell. At a later period, galvanism was thought to give rise to all the secretions, whether solid or fluid, and to imponderable animal heat. But how, as Alison observes, can one cause give rise to such different products, unless we allowed modifying effect to the capillaries? And if we go to them for *anything*, we may as well go to them for *all*. It is of late becoming a prevalent opinion, that all the secretions exist in the blood, though we cannot tell how they got there. This opinion originated with the ancients, who thought that the perspiration was only the watery part of the blood exhaled. It was afterwards thought that the urine was another part of the watery portion of the blood, attracted to the kidneys in its course through the inferior *vena cava*.

The vitiated state of the secretions in sleep, and in apoplexy, is owing to the stimulus derived from the brain being withdrawn. The *growth* of the body, or of any of its parts, is owing to deposition preponderating over absorption and *decay* is from the reverse.

I. *Deposition of Solids.* — The nails and hairs are not properly said to *grow* because they do not increase from interstitial deposition; but are pushed out or secreted by parts at the root. In what way these parts are laid down is not known. A tissue is an assemblage (at least after death) of certain proximate principles. There are ultimate anatomical particles into which this tissue may be divided, and which are all that can be observed by the unassisted senses; but these particles are composed of *striæ*; and these *striæ*, of globules. How these are combined we cannot tell. Probably coagulable lymph is thrown out containing the rudiments of organization, and sending vessels into the neighbouring parts, rather than receiving vessels *from* them. This is the way in which parts lost are received and morbid humours are formed; but whether the same process is adopted in merely supplying the gradual waste of the body is not known. It is a molecular action which is not understood and of which it is a mark of good sense to decline giving a solution.

The secretion depends on the character of the *capillaries*, and not on that of the *trunk;* so that the capillaries from the same trunk will not necessarily secrete the same product. It used to be thought that the periosteum secretes bone; but it only transmits the vessels which deposit it. The vessels of any particular tissue, can only secrete that kind of tissue.

The *vis plastica* was a name given to the formation of organs out of tissues. Some have endeavoured to state the laws by which this plastic force is regulatad; and they maintain that the nucleus is the same, though the development is different. This is what is meant by "the unity of organization." The doctrine is as old as Aristotle; but has latterly been revived by Frank, Cuvier, Carus, Meckel, St. Hilaire, &c. Frank adopted it, from observing the analogy between the skull and three vertebræ. If we compare these parts in *man*, the difference is great; but we should begin at the other end. In fishes, the orciput can scarcely be distinguished from the first vertebra. There is likewise an analogy between the bones of the upper jaw and those of the extremity; and the bones of the face are an expansion of the transverse processes of the vertebræ. All the bones of the body are a repetition of a vertebra, with a rib attached.

The analogy has been extended to the *soft* parts of the body. Through all classes of animals, both sides of the body correspond; except in the whale tribe; in which one side of the skull is larger than the other; and in one kind of fish, in which both eyes are on one side of the head. The doctrine appears fanciful; but the atomic theory was as much ridiculed once. It is much easier to sneer than to examine. No one will deny the analogy (both in the soft and in the hard parts) between the arms of a man, and the wings of a bird; or between the foreleg of a quadruped, and the fin of a fish. In the cray-fish we cannot tell the difference between the lower jaw and the ribs.

The analogy between the genital organs in the two sexes is very striking. Aristotle observed this. He said that the male organs were only distinguished by their greater heat; and there being no room internally, they were pushed out. At a certain period of fœtal life all are females. In all the cases of reputed hermaphrodotism, there has never been one in which the scrotum and labia, the testicles and ovaries, existed together. Nature seems to make one or the other, but not both. The diseases, also, of the two sexes correspend, in different climates. Aristotle tried to frame a system of zoology on the analogy of *functions;* but Geoffry St. Hillaire has framed one on the analogy of *structure*.

The renewal of lost parts is not very common in man; but there are cases on record of a nail being produced at the end of an amputated stump; and of the renewal of the *glans penis*, the *os uteri*, and the joints after excision. If the *actynia* be cut into twenty pieces, each piece supplies the parts that are wanting, and becomes a perfect animal. If we cut a polypus into twenty pieces, each piece will renew the other nineteen. Lobsters renew their limbs; and in a thunderstorm seem to throw them off, as if for amusement. In the legs of crabs, the joints nearest the body are most easily renewed; and if we remove one of the more distant joints, the animal tries often to get rid of a nearer joint; from the better chance it will then have of getting a new limb. There are four inorganic tissues in the body:—1. cuticle; 2. hair; 3. nails; 4. teeth. In vegetables the power of reproducing parts is unlimited.

II. *Deposition of Liquids.*—Some have arranged the fluids of the body according to their mechanical qualities, but that is too coarse a method. Others have arranged them according to their chemical qualities; but their constitution varies. Chaussier divides them into, 1. *Perspirable;* in which there is no proper apparatus, especially set apart for the purpose. 2. *Follicular.* 3. *Glandular.* The best general arrrangement is into, 1. *Crude* 2. *Molare* 3. *Secreted;* and the last may be subdivided as above. From what we have seen of the terminations of all arteries, all the secretions may be considered as *perspirable*. A follicle does not itself secrete, but receives the secretion from the arteries. In glands, which are the ramifications of small vessels, the secreted fluid passes from the arteries to the radicles of the ducts. In describing a gland. they used to begin at the wrong end; commencing with the parenchyna, and going on to the ducts; whereas, we should commence with the ducts, and go on to the parenchyma. In hepatitis the inflammation is situated in the ducts, and causes a more abundant secretion of mucus, which obstructs the egress of bile from the liver, and thus often gives rise to jaundice. Both in

nephritis and in *diuresis*, there is probably inflammation of the kidney; but in the former, the inflammation is situated in the *course* of the ducts, so that *less* urine is passed; while in the latter, it is seated in the *radicles* of the ducts, and thus gives rise to an *augmented* secretion of urine. We may go through all the glands in the body in the same way, and shew that they are liable to two kinds of inflammation. This may appear a subtle distinction; but in the lungs, which are only a conglomerate gland, we do not hesitate to allow the difference between *bronchitis* and *pneumonia*, which only differ as to the part of the air tubes affected.

The following is the mode of arranging the liquid secretions of the body, according to the plan we have indiceted. I. *Perspirable*- 1. Gastric Fluid. 2. Menstrual Fluid. 3. Humours of the Eye. 4. Humours of the Ear. 5. Fat. 6. Sweat. 7. Marrow. 8. Synovia. II. *Follicular*. 1. Mucilage. 2. Fæces. 3. Meibomian Fluid. 4. Cerumen. 5. Sebaceous Matter. III. *Glandular*. 1. Tears. 2. Saliva. 3. Panereatic Fluid. 4. Urine. 5. Semen. 6. Milk.

The average quantity of urine secreted daily, is about thirty ounces; being voided about six times, and about five ounces each time. About a hundred ounces of nutriment are received daily; and the daily exertions make up about the same weight. The stools constitute the smallest secretion. and the least important, although most attended to. We *secrete* more than we *excrete:* for the stools and urine are partially reabsorbed. The secretion of mucilage is more abundant than all the others put together. About eight ounces of mucus are secreted from the intestinal canal alone. The mucous tissue is very extensive. The internal surface of the air-tubes of the lungs, is estimated by Munro at thirty times that of the skin, and by others at a hundred times. The extent of the gastro-pulmonary mucous membrane is probably many thousand times that of the skin; and the genito-urinary mucous membrane is probably as extensive as the gastro-pulmonary. Hence, I think those are right who say that all diseases begin in the mucous membrane. All estimates of the quantity of mucus secreted are vague, owing to the quantity reabsorbed. It is not intended to be *voided*. *Blowing the nose* is a more unnatural practice than that of passing the urine in public. It may be tolerated in *cold* climates; but not in *hot* ones, such as Persia. In Rome a man could divorce his wife for blowing the nose; and Horace discharged more than one mistress for being guilty of it.

Sometimes fluids are discharged by other parts, if the natural passages are impeded. Mason Good mentions a lady, whose urine was passsd from the mamma. The most common of these vicarious discharges, is the menstrual fluid. There is not a reabsorption after a secretion by the natural parts, and then a deposition again by others; but the fluids are actually secreted by the latter. Some think all the secretions exist in the blood; but it is more probable they are only formed by the capillary arteries.

How does the want of secretion in one part give rise to it in another? We can only suppose it to be from sympathy; the irritation set up in one part being propagated to others. Irritation first produces contraction of the vessels, then relaxation follows; more blood is detained in them: and increased secretion is produced. Increased secretions, therefore, attend *diminished* irritation, though they may *follow* increased irritation. Increased secretion in one part diminishes the secretion of others; because it prevents a healthy stimulus being extended to them; and if the secretion of any part be diminished, that of other parts will be increased, from the extension to them of a preternatural stimulus.

The mucous membrane of the body, if spread out, would probably cover an acre of ground;—perhaps all Edinburgh, or the half of Scotland. Mucus forms a great part of all the secretions.

III. *Deposition of Æriform Fluids.*—The great change of the odour of the breath, upon a sudden unpleasant emotion of the mind, is from the instantaneous vitiation of the halitus of the mouth. The change which occurs in this, and in the intestinal gases, is too sudden to be the result of fermentation. The sudden filling of a fish's air-bladder must be from secretion; and this led Hunter to say, that all gases are secreted by arteries. Cullen was puzzled by the presence of air in the peritoneal sac; and presumed it to be the consequence of some perforation of the intestines the size of a pin-hole. But this cannot be the case when air is found in the pleura, or the uterus. The latter was once thought to be from the fermentation of retained semen producing carbonic acid.

But the gas found in the uterus, in these cases, is not carbonic acid, but oxygen and hydrogen. Dr. Hamilton (senior) thought it was air "sucked in" by the vagina. Probably all secretions are æriform, when first laid down.

Many cases are recorded in which the *vena portæ* could not have secreted the bile. Bichat thought it was *always* secreted from *arterial* blood. But the question is, not what is done when the ordinary apparatus is out of order, but what takes place in the ordinary state of the system. *Hepatic* bile is probably a *secretion; cystic* bile an *excretion*. I believe the latter to be much more copious than the former; and, from the living membrane of the gall-bladder being thrown into folds, that its secreting surface is more extensive than the secreting surface of the liver.

The carbonic acid produced in the lungs (if we adopt the view of its formation before explained) will be an example of vessels secreting air. Musk, ambergris, and all other strong animal products, are follicular secretions.

Errata.

No. 257, page 525, column 2, line 9, for "*Arcrussat,*" read "*Amussat.*"

Page 526, col. 2, line 57, for "*deaths,*" read "*death.*"

Page 527, col. 2, line 20 from bottom, for "*Vicq d'Agyr,*" read "*Vicq d'Azyr.*"

Page 529, col. 1, line 22 from bottom, for "*spinal.*" read "*spiral.*"

Page 535, col. 1, line 27 from bottom, for "*activity,*" read "*inactivity.*"

No. 258, page 558, col. 1, line 2, for "*superius,*" read "*superior.*"

Line 5, for "*fascial,*" read "*facial.*"

Page 559, col. 2, line 12, *dele* "in diameter."

Page 560, col. 1, line 35, for "*jerk,*" read "*jerks.*"

Page 561, col. 1, line 31, for "*trachæa vitiated,*" read "trachæa *convoluted.*"

MEDICO-CHIRURGICAL FORMULARY, 1837.

(Continued from page 650.)

Senegæ radix, . . ℈j ad ℈ij
Sennæ folia, . . . ℈j ad ʒj
Serpentariæ radix, . . gr. x ad ʒss
Simaroubæ cortex, . gr. ʒss ad ʒj
Sinapis semina, . . ʒj ad ʒss
Sodæ acetas, D., . . ʒj ad ʒiv
Sodæ carbonas, . . gr. x ad ʒss
—— subcarbonas, . gr. x ad ʒss
———— exsiccata, gr. v ad gr. xv
—— subboras, . . gr. x ad ʒss
—— murias. used in lotions.
—— sulphas, . . ʒj ad ʒj
—— tartarizata, . . ʒj ad ʒjss
Solutio muriatis barytæ, ♏ v ad m x
———— calcis, . ♏ xxx ad ʒj
Spartii cacumina, . . ℈j ad ʒj
Spigeliæ radix, . . gr. x ad ʒss
Spiritus ætheris aromaticus, f.ʒss ad f.ʒj
———— nitrici, . f.ʒss ad ʒj
———— sulphurici, f.ʒss ad f.ʒj
———— comp., . f.ʒss ad ʒj
—— ammoniæ, . f.ʒss ad f.ʒj
———— aromaticus, f.ʒss ad ʒj
———— fœtidus, . f.ʒss ad f.ʒj
———— succinatus, ♏ x ad f.ʒj
—— anisi, . . . f.ʒss ad ʒss
—— armoraciæ comp., f.ʒi ad ʒiv
—— camphoræ, used externally.
—— carui, . . . ʒj ad ʒss
—— cinnamomi, . f.ʒj ad f.ʒiv
—— colchici ammoniatus, f.ʒss ad ʒj
—— juniperi comp., . f.ʒj ad ʒiv
—— lavendulæ, used to make the spt. lavend. comp., and liniment. camph. comp.
—comp., . . . f.ʒss ad f.ʒij
—— menthæ pip., . f.ʒss ad ʒiij
—— ———viridis, f.ʒss ad f.ʒij
—— myristicæ, . f.ʒss ad ʒiv
—— pimentæ, . . f.ʒj ad ʒiv
—— pulegii, . . f.ʒj ad ʒiv
—— recificatus, used for making tinct.
—— tenuior, equal parts of rectified spirit of water.
—— rosmar., stim. externally, ʒj—ʒiv
Spongia usta, . . . ʒj ad ʒiij
Stannum, . . . ʒj ad ʒss
Staphisagriæ semina, . gr. iij ad gr. x
Stramonii folia et semina, gr. j ad gr. vi
Strychnia, . gr. 1-12th ad gr. ij
Strychnos, nux vomica, gr. iij ad gr. xv
Styracis balsamum. . gr. x ad ʒss
Succinum, . . . ℈j ad ʒj
Sulphur lotum, . . ʒss ad ʒij
—— præcipitatum, . ʒss ad ʒij
Swietenia febrifuga, . . ℈j—℈ij
Syrupus simplex. ad libitum.
—— acidi acetosi, . f.ʒj ad f.ʒij
—— althææ, . . f.ʒj ad f.ʒiij
—— aurantiorum, . f.ʒj ad f.ʒij
—— colchici autumnalis, f.ʒj ad f.ʒss
—— croci, . . f.ʒj ad f.ʒij
—— dianthi caryophilli, f.ʒj ad f.ʒij
—— limonum, . f.ʒj ad f.ʒiij
—— mori, . . . f.ʒj ad ʒiij
—— papaveris, . f.ʒj ad f.ʒiij

——— rhæados, used for colouring.
——— rhamni, . f.ʒiv ad f.ʒij
——— rosæ, . . . f.ʒij f.ʒj
——— sarsap., with the decoct. ʒi—ʒiv
——— scillæ, . . ʒi—ʒij
——— sennæ, . . f.ʒij ad f.ʒss
——— tolutanus, . . f.ʒj ad fʒiij
——— zingiberis, . f.ʒj ad f.ʒiij

Tabaci folia, see infusum tabaci.
Tamarindi pulpa, . . ʒss ad ʒjss
Taraxici radix, juice, . ʒss ad ʒjss
Terebinthina Canadensis, . ℈j ad ʒj
——— Chia, . . ℈j ad ʒj
——— vulgaris, externally.
Testæ, ... ʒss ad ʒjss
Tiglii, crotonis oleum, gtt. j ad gtt. iij
Tinctura acetatis ferri, m x ad f. ʒj
——— aloes, . . f.ʒss ad f.ʒjss
——— ætherea, . f.ʒj ad ʒij
——— comp., f.ʒj ad ʒiij
——— angusturæ, . . f.ʒj ad f.ʒij
——— assafœtidæ, . f.ʒss ad f.ʒiss
——— aurantii, . . f.ʒij ad f.ʒiij
——— benzoini comp., f.ʒss ad f.ʒjss
——— buchu, . . f.ʒj ad f.ʒiv
——— calumbæ . f.ʒj ad f.ʒiij
——— camphoræ comp., f.ʒj ad f.ʒiij
——— cantharidis, . m xv ad f.ʒj
——— capsici, . f.ʒss ad f.ʒij
——— cardamomi, . f.ʒj ad f.ʒij
——— comp., f.ʒj ad f.ʒss
——— cascarillæ, . f.ʒj ad f.ʒss
——— castorei, . . f.ʒj ad ʒij
——— castorei comp. f.ʒj ad ʒiv
——— catechu . f.ʒj ad f.ʒiij
——— cinchonæ . f.ʒj ad f.ʒiij
——— ammon. f.ʒss ad f.ʒij
——— comp. f.ʒj ad f.ʒiij
——— cinnamomi . f.ʒj ad f.ʒiij
——— comp. f.ʒj ad f.ʒiij
——— seminum colchici ♏ x ad f.ʒss
——— conii . . ♏ xx—xxx
——— croci sativi . f.ʒj ad f.ʒiij
——— digitalis . ♏ x ad ♏ xl
——— ferri ammoniati ♏ xx ad f.ʒj
——— muriatis . ♏ x ad ♏ xx
——— galbani. . f.ʒj ad f.ʒiij
——— gallarum. . . f.ʒj ad ʒiij
——— gentianæ comp. f.ʒj ad f.ʒiij
——— guaiaci . f.ʒj ad f.ʒij
——— ammon. f.ʒj ad f.ʒiij
——— hellebori nigri . fʒss ad ʒj
——— humuli . f.ʒss ad f.ʒiij
——— hyoscyami . ♏ xv ad f.ʒij
——— jalapæ . . f.ʒj ad f.ʒss
——— iodinii . . ♏ x ad ♏ xx
——— kino . . f.ʒj ad f.ʒij
——— moschi . . f.ʒj ad f.ʒjss
——— myrrhæ . . f.ʒss ad f.ʒj
——— nucis vomicæ . ♏ v ad ♏ xx
——— opii . . ♏ x ad f.ʒj
——— ammoniata f.ʒss ad f.ʒij
——— piperis cubebæ . ♏ x ad f.ʒj
——— quassiæ . . f.ʒj ad f.ʒij
——— rhei . f.ʒij ad f.ʒjss
——— et gentianæ . f.ʒj ad f.ʒij
——— scillæ . . ♏ xv ad f.ʒj
——— sennæ . . f.ʒss ad ʒj
——— serpentariæ . f.ʒj ad f.ʒiij
——— toluiferæ balsami f.ʒss ad ʒij
——— valerianæ . f.ʒij ad f.ʒss
——— ammon. f.ʒj ad f.ʒij
——— veratri albi . ♏ v ad ♏ x
——— zingiberis . f.ʒj ad f.ʒiij
Tormentillæ radix . ℈j ad ℈j
Toxicodendri folia . . gr. j ad gr. x
Tragacantha . . gr. x ad ʒj
Tussilago . . . ʒiv ad Oss

Ulmi cortex, see Decoct.
Unguenta, see Formulæ.
Unguentum hydrargyr. mitius . ʒj
Uvæ passæ, ad libitum.
—— ursi folia . . gr. x ad ℈ij

Valerianæ radix . . . ℈j ad ʒj
Veratri radix . . gr. ij ad gr. v
Vinum aloes . . f.ʒiv f.ʒjss
——— antimonii tart. . f.ʒss ad f,ʒjss
——— colchici . . ♏ xxx ad f.ʒj
——— gentianæ comp. . ʒij ad f.ʒvj
——— ferri . . f.ʒj f.ʒiv
——— ipecacuanhæ . ♏ xv ad f.ʒj
——— nicotianæ tabaci. ♏ x ad ♏ xxxvi
——— opii . . ♏ x ad f.ʒj
——— rhei . . f.ʒiv ad f.ʒss
——— veratri . . f.ʒss ad f.ʒij
Violæ odoratæ flores . . ʒj ad ʒij

Zedoariæ radix . . . ℈j—℈j
Zinci oxydum . . gr. j ad gr. vi
—— sulphas . . gr. i ad gr. ij
Zingiberis radix . . gr. v ad ℈j

A TABLE

EXHIBITING THE NAMES AND DOSES OF MEDICINES IN M. MAGENDIE'S FORMULARY OF 1836.

(Translated from the French.)

Acetas Morphiæ. (F. Magendii. ℞ Morphiæ gr. xvj.; Aq. Destillatæ ʒ j. Acidi Acetici, m iv.; Alcoholis, ʒ i. M. Dosis m vj.—xxiv.

Syrupus Morphiæ. ℞ Morphiæ gr. iv. Syrupi simplicis, Oj. M. Dosis ʒ j secundis horis.

Syrupus Morphiæ Citratis. ℞ Morphiæ Puræ gr. xvj.; Acidi Citrici Crys

tal. gr. viij. Aquæ Destillat. ʒ ij.; Tinc. Coccinellæ, ʒ ij. M. D. m vj.—xx.

Solutio Morphiæ Hydrochloratis. ℞ Morphiæ Hydrochlor., ϑ ss.; Aquæ Destillatæ ʒ xiv. M. D. m xv.—xxx.

Syrupus Morphiæ Sulphatis. ℞ Morphiæ Sulphatis gr. iv.; Syrupi Simplicis Oj. D. ʒ i. secunda hora.

Acidum Hydrocyanicum Medicinale. ℞ Acidi Hydrocyanici, formula Gay-lussac, p. j. pond., Aq. Destillatæ p. viiiss. M. D. m. vj.—xv.

Hydrocyanic acid becomes inert when the phial that contains it is frequently opened; and it cannot be procured of the same strength in any two laboratories.

Brominii Solutio. ℞ Brominii, ʒ ss.; Aq. Destillat. ʒ iss. M. D. m iv.

Employed when Iodine fails, and when the constitution is accustomed to it.

Bromatis Ferri. ℞ Bromatis Ferri, Acaciæ Pulv., āā gr. xij.; Conf. Rosæ gr. xviij. Forma in pilulas xxiv. Sumantur duæ m. n.

In hypertrophy of the heart and other organs; and in scrofulous and glandular engorgements.

Bruciæ. Pulvis gr. ¼—vj.

According to Andral, six grains are equal to one of Strychnine.

Bruciæ Tinctura. ℞ Bruciæ gr. xviij.; Alcoholis ʒ j. M. D. m. vj.—xxiv.

The Acetate, Hydrochlorate, Nitrate, Phosphate, and Sulphate of Brucine are not as yet employed medicinally.

Chloruretum Auri et Sodæ. ℞ Chlor. Auri et Sodæ, ϑ ss,; Adipis ʒ iv. M.

Applied on a blistered surface in obstinate venereal and cutaneous diseases; and one-fifteenth of a grain is mixed with starch, and rubbed on the gums in similar cases. Very rarely used in this kingdom.

Chloruretum Zinci. ℞ Zinci Chlor. ʒ j.; Farinæ Tritici, ʒ ij.—iij.—iv.; Aquæ q. s., ut fiat cataplasma.

Used by M. Canquoin in cancer and lupus as an escharotic with great advantage. It was first employed in this country by Dr. Bureaud Rioffrey—in St. Bartholomew's Hospital, in October, 1835, on a patient of Mr. Lawrence's. Mr. Ure has since combined the chloride with the sulphate of lime, and thinks the preparation superior to the former.—*(London Med. and Surg. Journal), Dec.* 10, 1836.

Codeina— Anodyne gr. i.— iij.—*Hydrochlorate,* and *Nitrate,* more powerful than the former. gr. ss.—j.; in neuralgiæ with astonishingly good effect.

Elaterina. ℞ Elaterinæ gr. j.; Alcohol. ʒ j.; Acid. Vitriol.; m iv. M. D. xx.—xl. in Aq. Cinnam. ʒ ss.

First used at Edinburgh as a drastic purgative.

Emetina Pura. Syrupus Emetinæ. ℞ Emetinæ gr. iv. Syrup, simpl. Oj. D. ʒ i—ij.

In pertussis, pulmonary catarrh, chronic diarrhœa.

Emetinæ Impuræ. ℞ Emetinæ Impuræ, gr. xvj.; Syrup Oj.

Preferred to syrup of Ipecacuanha.

Ether Hydrocyanicus—Sedative, m v. viij.

Ether Sulphuricus cum Deuto-Iodaret. Hydrarg. ℞ Ether Sulphuric, ʒ iss., Deuto-Ioduret. Hydrarg. ϑ j. M. D. m v.—xv. The alcoholic solution is in the same proportions m v.—xx.—Stimulant and antisyphilitic.

Extractum Alkaninum Nucis Vomicæ. Stimulant in the same cases as Strychine gr. i.—viij.

Extracti Opii sine Narcotina. Anodyne, gr. ss.—v.

Gentianinæ Syrupus. ℞ Gentian. gr. xvj.; Syrup. Oj. M. D. ʒ j.—ij.

A tonic in scrofulous cases.

Tinctura. ℞ Gentianinæ gr. v. Alcohol; ʒ j. M. D. ʒ i—iv. in a draught.

Ilicina—Febrifuge, gr. vi.—xxiv.

Iodinii Tinctura. ℞ Iodinii, gr. xlviij.; Alcoholis, ʒ j. M. D. m v.—xx.

The most objectionable preparation of Iodine.

The following are M. Lugol's Formulæ of Iodine, and were generally preferred to all others until those of the London Pharmacopœia of 1836 appeared. I therefore copy them.

Ioduretted Mineral Waters. H. St. L.

	No. 1.	No. 2.	No. 3.
℞ Iodnii,	gr ¾,	gr. 1,	gr. 1¼;
Potass. Hydriod.	gr. 1½,	gr. ij,	gr. ijss;
Aq. Destil.	gr. ʒ viij,	ʒ viij,	ʒ viij;

Employed by M. Lugol in the treatment of scrofula.

At first ʒ vj, then ʒ viii of the water, No. 1, daily, in two or three dosses. After the first fifteen days, ʒ viij of No. 2 is given daily; and in the fourth week, ʒ viij of No. 3. These liquids should be sweetened at the moment of administration.

Ioduretted Solution. (Lugol).

℞ Iodinii, ℈ i;
Potassæ. Hydriod., ℈ ij;
Aq. Destill., ʒ viij.

Solve.

Six drops of this solution are given twice a day in half a glass of water, sweetened with sugar. Each week the dose should be increased two drops until it has reached xxx or xxxvi drops.

If the sugar is added to the mixture, a decomposition is effected. It is to be used at the time of taking each dose.

Pills of Iodine. H. of Italy.

℞ Iodinii, gr. i;
Pulv. Glycyrrh. ℈ j;
Succi Sambuci q. s.

Divide in pilulas viij, ex quibus sumantur iv—viij quotidie.

As Emmenagogues.

In several cases of ovarian, uterine, and other diseases of women, treated with the ioduretted preparations, menorrhogia has been produced. According to M. Lugol and others, the most objectionable mode of using pure iodine is in pills, and next in tincture.

Ioduretted Solutions of Iodine for External Use. H. St. L.

	No. 1.	No. 2.	No. 3.
℞ Iodinii,	gr. ij,	gr. iij,	gr. iv;
Potass. Hydriod.	gr. iv,	gr. vj,	gr. viij;
Aq. Destill.,	Oj,	Oj,	Oj.

Employed in lotions, collyria, and fomentations in scrofulous affections, and injections in fistulous passages, the nasal fossæ, &c.

Rubefacient Solution of Iodine. H. St. L.

℞ Iodinii, ʒ iv;
Pot. Hydriod., ʒ i;
Aq. Destill., ʒ vj.

Fiat solutio.

Employed to stimulate scrofulous ulcers, &c.

It is also applied in baths, added to a sufficient quantity of tepid water, until this becomes yellow.

Ioduretted Cataplasm. H. St. L.

℞ Cataplasm. Lini, q. v.;
Solutionis Iodinii Rubefacient., q. s.
Misce.

This cataplasm is applied very hot to glandular swellings, chronic engorgements, &c.

Caustic Iodine. H. St. L.

℞ Iodinii,
Potass. Hydriodat. āā ʒ i;
Aq. Destill. ʒ ij.

Solve.

This preparation is used when the rubefacient solution fails to excite scrofulous ulcerations, and to apply to cicatrices, &c.

Ioduretted Baths. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
℞ Iodinii,	ʒ ij,	ʒ iijs,	ʒ iij,	ʒ iv;
Potass. Hydriod.	ʒ iv,	ʒ v,	ʒ vj,	ʒ viij;
Aq. Distil.	ʒ vj,	ʒ vj,	ʒ vj,	ʒ vj.

Solve.

This solution is added to a bath, prepared in a wooden vessel.

At the infirmary for scrofula at Margate, the greatest benefit is produced by warm ioduretted fomentations. The worst forms of scrofula are cured at this institution.

In the ioduretted baths for children, the drachms of the iodine and the hydriodate of potass are changed for scruples of the same ingredients. They are employed with success in scrofula.

Ioduretted Pommades. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
℞ Iodinii,	gr. xij,	gr. xviij,	gr. xxi,	ʒ ss;
Potass. Hydriod.	℈ iv,	ʒ ij,	ʒ iiss,	ʒ iiss;
Adipis recent.,	ʒ ij,	ʒ ij,	ʒ ij,	ʒ ij.

Misce.

Used to dress scrofulous ulcers, and in frictions, to swellings of the same nature.

Iodas Strychniæ; gr. ⅛ in form. Pil. m. n.

Ioduretum Arsenici. Unguentum. ℞ Arsenici Iodureti, gr. iij; Adipis ʒ j. M.

To be employed with great caution.

Ioduretum Barii. Unguentum. ℞ Barii, gr. iv; Adipis ʒ j M.

Ioduretum Ferri. ℞ Ferri Iodureti ʒ iv; Vini Bardigaræ Oj. M. D. ℥ ss. m. n. Externally ʒ iv.—Aquæ Oj. In enemata injections and lotions.

Unguentum. ℞ Ferri Iodureti ʒ iss., Adipis ℥ j. M.

Ioduretum Plumbi. ℞ Plumbi Iodureti ʒ j. Adipis ℥ j. M.

Employed when the other preparations of Iodine redden the skin.

Ioduretum Sarsaparillæ. ℞ Decocti Sarsaparillæ, Oij; Hydriodatis Potass.; ʒ i—iss. Syrupi Aurantii ℥ ij. M.

To be taken in twenty-four hours, in secondary syphilis.

Ioduretum Sulphuris. ℞ Iodureti Sulphuris, gr. xxij, Adipis ʒ vj. M.

In cutaneous scrofula and tubercles.

Ioduretum Zinci. Unguentum. ℞ Ioduret. Zinci, ʒ j; Adipis ℥ j. M.

Lupulina. Pulvis, gr. xij.—xx. *Tinctura.* Lupulinæ p. i. Alcoholis p. 2. D. m. xx—xl. M. *Syrupus.* ℞ Lupulinæ, p. i. Syrupi p. 7. M. ℥ ss—j.

In the same cases as hop.

Mannite. Aperient ʒ iss.—iij.

Mistura Acidi Hydrocyanici Medicinalis. ℞ Acidi Hydrocyanici, ʒ j; Aquæ Destillat. Oj.; Sacchari ℥ j. Misce. Dosis ℥ ss.—ij.

Demulcent and Sedative.

Mistura Cyanureti Potassæ. ℞ Aquæ Lactusæ ℥ ij; Potassæ Cyanureti gr. ss.; Syrupi Malvæ ℥. M. D. ℥ ss.—iij. in die.

Mistura Emetinæ. ℞ Emetinæ puræ. gr. iv., Aq. Flor. Aurant. ℥ ij. Syrupi ejusdem ℥ ss. M. D. ʒ iv. singula semihora ad emesin.

Mistura Hydrobromatis Potassæ. ℞ Aq. Lactusæ ℥ iij; Hydrobromatis Potassæ, gr. xij; Syrupi Malvæ, ℥ j. M. D. ℥ ss.—iij.

Stimulant, tonic and deobstruent.

Mistura Hydrocyanatis Potassæ. ℞ Potassæ Hydrocyan., ʒ ij. Aquæ Destillatæ, Oj; Sacch. puri, ℥ iss. M. D. ℥ ss.—7 quotidie.

Sedative.

Mistura Iodureti Potassæ. ℞ Aquæ Lactusæ ℥ vj., Aq. Menth. Pip., ℥ ij; Iodureti Potassæ, ʒ iv; Syrupi Malvæ ℥ j. M. D. ℥ ss.—j.

Stimulant and deobstruent.

Mistura Strychniæ. ℞ Aq. Destillatæ ℥ j.; Strychniæ gr. j. Sacchari Albi, ʒ ij.; Acidi Acetici Diluti, m. iij. M. Dosis ʒ j. mane nocteque

Stimulant. Vide *Pills.*

Morphia. Vide *Acetate of Morphia.*

Narceina. Not used medicinally.

Narcotina. The dose of a drachm produced no effect in twenty-four hours.

Oleum Aspidii Fil. Anthelmentic. m. j.

——— *Euphorb. Lathyris* purgative m. iv.—vij.

——— *Phosphori.* ℞ Phosphori ʒ j., Olei Amygdal. ℥ ij. M. D.—m xx.—xxx daily.

Stimulant.

Oleum Sinapis Nigræ. Rubifacient.

Pariera Brava Infusum. ℞ Parieræ Bravæ ʒ ij.—iv.; Aquæ Bullientis O j. M. D. ℥ ss. ter in die.

Pilula Ferri Bromatis ℞ Pulv. Bromatis Ferri gr. xij.; Conf. Rosæ gr. xvj,; Acaciæ Pulv. gr. xij. In pilulas xx divide, quarum capiat ij. m. n.

In scrofula.

Pilula Deuto-Iodureti Hydrargyri. ℞ Hydrarg. Deuto-Iodur. gr. j.; Extracti Juniperi gr. xij.; Pulveris Glycyrrhizæ q. s. ut fiant pilulæ octo. Dosis 1. m. n.

Antisyphilitic and atrophic in hypertrophies of different organs.

Pilula Hydrarg. Proto-Iodureti.

Same proportions as the last, and employed in the same diseases.

Pitula Veratriæ. ℞ Veratriæ gr. ij.; Pulv. Glycyrrhizæ gr. xij.; Ext. Hyoscyami gr. vj. M. In pilulas xij. divide, quarum capiat j ter in die.

Pilula Veratriæ Tartarisatæ. (Turnbull.) ℞ Veratriæ Tart. gr. ij.; P. Glycyrrhizæ gr. xij.; Mucilag. Acaciæ, q. s. In pilulas xij. divide, capiat j ter in die.

Piperina. Febrifuge gr. ss.—ij.

In pills only.

Potassæ Hydriodas. D ʒ j.—iiij. in Misturæ ʒ viij. (Vide *Formulary.*)

Quininæ Sulphas. Syrupus. ℞ Quiniæ gr. xxxij.; Syrupi O j. M. D. ʒ ss—j.

Tinctura. ℞ Quiniæ gr. vj.; Alcoholis ʒ j. M. D. ʒ j—iij. (Vide *Vinum.*)

Salacina. Weaker than Quinine, and used in the same diseases.

Strychnia. Strychnine, or the Hydriodate, Hydrochlorate, Nitrate, Phosphate, Subcarbonate gr. 1-12th—ss. daily.

The pure Strychnine is preferred, gr. 1-12th—gr. ij.; the dose being gradually increased every eight or ten days. Pills are preferred. (Vide *Formulary.*)

Tinctura. ℞ Strychiniæ gr. iij.; Alcholis ʒ j. M. D. m. vj.—xxiv.

Syrupus Acetatis Morphiæ. (Vide *Acetas Morphiæ.*)

Syrupus Acidi Hydrocyanici. ℞ Syrupi Simplis O j; Acidi Hydrocyanici Medicinalis ʒ j. M. Dosis ʒ i—iv.

Sedative.

Syrupus Emetinæ. (Vide *Emetina.*)

Syrupus Gentianinæ. (Vide *Gentianina.*)

Syrupus Potassæ Hydrocyanatis. ℞ Potassæ Hydrocyanatis ʒ j.; Syrupi Simplicis O j. M, Dosis ʒj—iij.

Sedative.

Syrupus Lupulinæ. (Vide *Lupulina.*)

Syrupus Quiniæ. (Vide *Quinia.*)

Syrupus Morphiæ Sulphatis. (Vide *Morphia.*)

Tinctura Bruciæ. ℞ Alcoholis ʒ j.; Bruciæ gr. xiij.—m. vj.—xxiv. M.

Weaker than strychinine.

Tinctura Gentianinæ. (Vide *Gentianina.*)

Tinctura Lupulinæ. (Vide *Lupulina.*)

Tinctura Quiniæ. (Vide *Quinia.*)

Tinctura Strychniæ. (Vide *Strychnia.*)

Tinctura Veratrinæ. ℞ Veratriæ gr. iv.; Alcoholis ʒ j. M. Dosis m. x—xx.

Unguentum Bromatis, et Hydrobomatis Potassæ. ℞ Adipis ʒ j; Potassæ Hydrobomatis gr. xxiv; Brominæ Liquidæ m vj—xij. Misce.

Stimulant and discutient.

Unguentum Delphiniæ. ℞ Delphiniæ, gr. x.—xxx; Adipis ʒ j.—iss. M. (Turnbull.)

Unguentum Hydrarg. Deuto-Iodureti. ℞ Hydr. Iodureti, ϑj. Adipis ʒ iss. Misce.

Employed to excite absorption in in glandular and other enlargements.

Unguentum Potassæ Hydriodatis. ℞ Potassæ Hydriodatis, ʒ j. Adipis ʒ j. fiat unguentum.

In the same cases as the last.

Unguenti Arsenic. Iodureti. ℞ Arsenic. Iodureti gr. iij. Adipis ʒ j. M,

Used with great caution.

Unguentum Barii Iodureti. ℞ Barii Iodureti, gr. iv; Adipis ʒ j. M.

Unguentum Iodureti Plumbi. ℞ Plumb. Iodureti ϑj.—ʒ ss. Adipis ʒ j—M.

Employed when the ioduretted preparations irritate the skin, and tend to excite ulceration.

Unguentum Sulphuris Iodureti. (Vide *Ioduretum Sulphuris.*)

Unguentum Iodureti Zinci. (Vide *Ioduretum Zinci.*)

Unguentum Proto-Iodureti Hydrargyri. ℞ Hydrarg. Proto-Iodureti ϑj. Adipis ʒ j. M. Stimulant. Lugol orders ϑ ij—iij—iv. Adipis ʒ ij.

Unguentum Veratriæ, ℞ Veratriæ gr. iv. Adipis ʒj. Sit unguentum.

Urea. Deuretic ϑ j—ʒ j.

Vinum Cinchoninæ. ℞ Maderæ Oij.—ʒ iij—ʒ ijj. Cinchoninæ Sulphatis gr. xxiv—Dosis ʒ i—bis vel ter in die.

Vinum Quiniæ. ℞ Vini Maderæ, Oij. ʒ iij—ʒ ij; Quiniæ Sulphatis, gr, xij. M.

An ordinary bottle of wine will dissolve the quantity of Cinchonine or Quinine given in the preceding preparations. This formula is preferable to the mixture of Port wine and Cinchona formerly in general use.

ADDITIONS TO THE MATERIA MEDICA

IN THE LONDON PHARMACOPŒIA, DECEMBER, 1836.

Aconitina.
Aspidium filix mas.
Brominium.
Cajeputi.
Carbo animalis.
Cetraria Islandica.
Chimaphila corymbosa.
Creasoton.
Cyminum—cuminum.
Diosma.
Ergota.
Ferri percyanidum.
—— sesquioxidum.
Fici.
Iodinium.
Lactucarium.
Lobelia.
Lupulus—humulus.
Maranta arundinacia.
Mucuna pruriens.
———- legum pubes.
Pariera.
Piper cubeba.
Potassæ bitartras.
———- chloras.
Potassii ferro cyanidum.
Quina.
Sabadilla.
Sarza.
Scoparius.
Sodii chloridum.
Tussilago.
Vinum Xericum.

NEW MEDICINES IN THE LONDON PHARMACOPŒIA,

DECEMBER 1836;

ALL OF WHICH WILL BE FOUND IN MY TRANSLATION OF A NEW PRACTICAL FORMULARY OF HOSPITALS, SECOND EDITION, 1836.

Acetum cantharidis.
Acidum hydrocyan. dil.
——— phosphoricum dilutum m. ij—iv.
Ant. oxysulphuretum (precep. alb.)
—— potassio-tartras.
Argenti cyanidum.
Barii chloridi liqnor m ij—x.
Bismuthi trisnitras.
Calcii chloridum.
Calx Chlorinata.
Cataplasma conii.
——— fermenti.
——— lini.
——— sinapis.
Confectio amygdalæ.
——— piperis nigri.
——— rutæ.
Cupri ammonio-sulphas (cupri amm).
Decoct. cetrariæ (lichenis).
——— chimaphilæ.
——— dulcamaræ.
——— granati.
——— malvæ comp.
——— scoparii comp.
——— uvæ ursi.
Emplastrum belladonnæ.
Enema aloes.
——— colocynthidis.
——— opii.
——— tabaci.
——— terebinthinæ.
Extract. colchici.
——— lupuli.
——— pareiræ.
——— uvæ ursi.
Ferri ammonio-chloridum. (ammoniatum.)
—— iodidum.
—— potassio-tartras.
—— sesquioxydum. subcarb.

Hydrargyrum ammonio-chloridum. (prec. album.)
——— bichloridum (oxym.)
——— bicyanidum.
——— biniodidum.
——— binoxydum (rub.)
——— bisulphuretum (sulph. r.)
——— chloridum (subm.)
——— iodidum.
Infusum diosmæ.
——— lupuli.
——— krameriæ.
——— pareiræ.
——— scoparii.
——— simarubæ.
Linimentum ammoniæ.
——— sesquicarbonatis.
——— terebinthinæ.
Liquor argenti nitratis.
——— barii chloridi.
——— calcii chloridi.
——— cupri ammonio sulphatis.
——— hydrarg. bichloridi.
——— plumbi diacetatis dilutus.
——— potassæ arsenitis (arsenicalis).
——— potassæ effervescens.
——— potassii iodidi comp.
——— sodæ chlorinatæ.
——— effervescens.
Morphia.
Morphiæ acetas.
——— hydrochloras.
Oleum æthereum.
——— sambuci.
Pilulæ conii c.
—— hydr. chloridi c.
——— iodidi.
—— ipecac c.
—— styracis c.
Plumbi chloridum.
——— iodidum.
——— oxydum hydratum.
Potassæ bicarbonas.
——— bisulphas.
——— hydras.
Potassii bromidum.
——— iodidum.
——— sulphuretum.
Quinæ disulphas.
Sodæ biboras.
—— chloridum.
—— potassio-tartras.
Strychnia.
Tinctura colchici.
——— conii.
——— cubebæ.
——— ferii ammonio-chloridi.
——— sesquichloridi (vel mur.)
——— iodinii c.
Vinum antimonii potassio-tartratis.
——— veratri.
Unguentum ant. potassio-tart.
——— cantharidis.
——— creasoti.
——— gallæ c.
——— hydr. iodidi.
——— biniodidi.
——— ammonio chloridi. (vel precip. alb.)
——— iodinii c.
——— plumbi c.
——— iodidi.

LIST OF MEDICINES,

THE NAMES OF WHICH ARE CHANGED IN THE NEW PHARMACOPŒIA.

NOMINA PRIORA.	NOMINA NOVA.
Acidum aceticum dilutum.	Acetum destillatum.
——— muriaticum.	Acidum hydrochloricum.
Ammoniæ murias.	Ammoniæ hydrochloras.
——— subcarbonas.	——— sesquicarbonas.
Antimonii sulphuretum.	Antimonii sesquisulphuretum.
——— sulphuretum præcipitatum.	——— oxysulphuretum.
Antimonium tartarizatum.	——— potassio-tartras.
Arsenicum album.	Acidum arseniosum.
Bismuthi subnitras.	Bismuthi trisnitras.
Calcis murias.	Calcii chloridum.
Ceratum simplex.	Ceratum.
Confectio amygdalarum.	Confectio amygdalæ.

Confectio aurantiorum.	Confectio aurantii.
——— scammoneæ.	——— scammonii.
Cuprum ammoniatum.	Cupri ammonio-sulphas.
Decoctum cinchonæ.	Decoctum cinchonæ cordifoliæ.
——— lichenis.	——— cetrariæ.
——— sarsaparillæ.	——— sarzæ.
——— sarsaparillæ compositum.	——— sarzæ compositum.
Emplastrum picis compositum.	Emplastrum picis.
Extractum cinchonæ.	Extractum cinchonæ cordifoliæ.
——— opii.	———- opii purificatum.
Ferri subcarbonas.	Ferri sesquioxydum.
Ferrum ammoniatum.	ammonio-chloridum.
——— tartarizatum.	potassio-tartras.
Hydrargyri oxydum cinereum.	Hydrargyri oxydum.
———oxydum rubrum.	———- binoxydum.
———oxymurias.	———- bichloridum.
———submurias.	———- chloridum.
———sulphuretum nigrum.	———- sulphuretum cum sulphure.
———sulphuretum rubrum.	———- bisulphuretum.
———præcipitatum album.	———- ammonio chloridum.
Infusum caryophyllorum.	Infusum caryophylli.
Linimentum ammoniæ fortius.	Linimentum ammoniæ.
——— ammoniæ subcarbonatis.	———- ammoniæ sesquicarbonatis.
——— hydrargyri.	———--- hydrargyri compositum.
——— saponis compositum.	———--- saponis.
Liquor ammoniæ subcarbonatis.	Liquor ammoniæ sesquicarbonatis.
——— arsenicalis.	potassæ arsenitis.
——— calcis muriatis.	calcii chloridi.
——— cupri ammoniati.	cupri ammonio-sulphatis.
hydrargyri oxymuriatis.	hydrargyri bichloridi.
plumbi subacetatis.	plumbi diacetatis.
potassæ subcarbonatis.	potassæ carbonatis.
Magnesiæ subcarbonas.	Magnesiæ carbonas.
Mistura amygdalarum.	Mistura amygdalæ.
Mucilago acaciæ.	acaciæ.
——— amyli.	Decoctum amyli.
Oleum pulegii.	Oleum menthæ pulegii.
terebinthinæ rectificatum.	terebinthinæ purificatum.
Oxymel simplex.	Oxymel.
Pilulæ hydrargyri submuriatis compositæ.	Pilulæ hydrargyri chloridi compositæ.
---- saponis cum opio.	- saponis compositæ.
Plumbi oxydum semivitreum.	Plumbi oxydum.
——— subcarbonas.	carbonas.
Potassa fusa.	Potassæ hydras.
Potassæ carbonas.	bicarbonas.
subcarbonas.	carbonas.
supertartras.	bitartas.
sulphuretum.	Potassii sulphuretum.
Pulvis antimonialis.	Pulvis antimonii compositus.
Sodæ carbonas.	Sodæ sesquicarbonas.
—— murias.	Sodii chloridum.
subboras.	Sodæ biboras.
subcarbonas.	carbonas.
Soda tartarizata.	potassio-tartras.
Spiritus camphoræ.	Tinctura camphoræ.
lavendulæ compositus.	———lavendulæ composita.
pulegii.	Spiritus menthæ pulegii.
Syrupus aurantiorum.	Syrupus aurantii.
- sarsaparillæ.	sarzæ.
- simplex.	Syrupus.
Tinctura ferri ammoniati.	Tinctura ferri ammonio-chloridi.
——— ferri muriatis.	——— ferri sesquichloridi.

——— rhei composita.	———rhei.
——— sennæ compositæ.	———sennæ.
Vinum antimonii tartarizata.	Vinum antimonii potassio-tartratis.
Unguentum elemi compositum.	Unguentum elemi.
———-- hydrargyri præcipitati albi.	———-- hydrargyri ammo.-chloridi.

BRITISH MEDICAL ASSOCIATION.

We have much pleasure in being able to lay before our readers a copy of the ADDRESS *which was read at the public meeting held at Exeter Hall on the* 19*th of January.*

GEORGE WEBSTER, ESQ., *of Dulwick, in the Chair.*

ADDRESS.

THE medical profession in this country has long been, and is at present, in a most unsettled and unsatisfactory state, whether we regard the position of the physician and the consulting surgeon, or that of the general practitioner. This has arisen partly from the neglect of medical affairs by the Legislature, partly from the selfishness and the misgovernment of those whose duty it ought to be to encourage medical science, and to protect the rights and privileges of the profession, and partly, if not *chiefly*, from the apathy, the jealousy, and the disunion, existing in the general body, the members which, were they but animated by a spirit of union, and a feeling of sympathy towards each other, might compel attention to their wants and grievances.

Various attempts have, from time to time, been made by differen societies, and by public spirited individuals, to overcome special or even general grievances. In some few instances success has crowned their exertions, but more frequently, as they have not been supported by their brethren at large, those efforts have failed; while, personally, the time and trouble bestowed, the anxiety endured, and, sometimes, the pecuniary loss sustained, have been so considerable as to deter others from pursuing the same meritorious, though, in general, thankless and unprofitable course. The infliction of injuries, and the invading or witholding of acknowledged rights, may be patiently borne, and long submitted to, by men who are actively engaged in the active and responsible duties of their professsion—men, who, from a dislike to publicity, would rather silently suffer, than arouse themselves to overcome evils and wrongs which have been gradually accumulating. At length, however, the addition of new grievances, or even of a single grievance of some magnitude, may render the whole insupportable; and such, particularly of late, has been the case in the medical profession. It required but the recent, and still continued, systematic attempts to degrade and lower the respectability and usefulness of medical men to be added to previous evils, to fill the cup of endurance to overflowing.

If the human mind be not utterly debased by ignorance, superstition, or slavish fear, opposition and resistance are sure, sooner or later, to follow oppression and the infliction of wrongs; and in proportion to the intelligence of those oppressed will be the degree of energy and indignation exhibiited in shaking off the yoke. The profession has, in a great measure, already been aroused, and is daily becoming more alive to a sense of what is so justly due to its own honour and dignity; and resistance to the attempts alluded to has brought into review the many other grievances under which it labours. For these and other reasons, it is now generally felt and acknowledged, that the present is a most favourable opportunity for medical men to unite in a spirit of a kind and liberal feeling to aid and assist each other in upholding their undoubted rights and privileges, and endeavour to obtain those which they ought to possess, as members of a learned, a laborious, and a most useful profession.

The medical profession is, in reality and ought, emphatically, to be considered as ONE BODY; and its UNITY is the principle which must be kept constantly in view in effecting the contemplated necessary and salutary changes. At present however, there are most unnatural divisiens and degrading distinctions, which ought not to exist in a scinentific and liberal body, where the circle of education, and the extent of attainments, are now so nearly alike in every department

The interests and feelings of what are usually called, "The Three Branches of the Profession," are stated, whether correctly or not, to be much at variance, and the different ranks are not unfrequently accused of infringing on each others' provinces, and overstepping those boundaries which, though not always very clearly defined, are yet generally acknowledged and sufficiently well understood in practice.

Even at the supposed fountain heads of professional honour and dignity—in the governing bodies—the colleges and corporations—it is well known there are also variances, divisions, and unseemly distinctions, which are inconsistent with the duties they owe to the members and the public. This has proceeded from the entire absence of responsibility, from the very imperfect powers, and from the defective laws of these institutions; so that were they always wisely and impartially administered, the antiquated charters of Henry the Eight, of James the First, or the latter one of George the Third. and the Acts of Parliament of recent times, are totally inadequate to the wants and requirements of the profession, and incompatible with the spirit and intelligence of the present day.

We are not much surprized, then, on looking at their past histories, to find that instead of advancing the science and promoting the welfare of the profession, these bodies have totally neglected, or entirely overlooked, many of the most important duties entrusted to them; that sometimes they have so far perverted the powers they possessed as almost to persecute and oppress talented and meritorious individuals; and that instead of protecting they have trampled upon the rights of their medical brethren.

In the College of Physicians there is an unjust and degrading division into two classes, the fellows and the licentiates. The fellows, or the aristocratic ranks, are taught to plume themselves upon their supposed superiority in having been educated under the *moral restraints!* and *pious discipline!* of Oxford and Cambridge—the only doors to the fellowship, unless by selection, or special favour, which almost necessarily leads to special obsequiousness and dependence on the college rulers. The very trifling and unimportant circumstance indeed occurs, that at these famed universities medicine never has been, and probably never can be, efficiently taught, for want of hospitals and other means of teaching, but this weighs as nothing in the scale with this learned and highly respectable body. (Cheers.)

The licentiates—the long degraded and insulted licentiates—they have generally been educated where medicine is thoroughly and extensively taught in all its branches. They may have studied at universities as moral and as religious as the far-famed English seats of learning, but this by no means entitles them to rank with the Socii; they are altogether an inferior race,—they are unworthy of a single post of honour in the college, or to interfere, however remotely, in the government of its affairs; and as far as union and interest can go, they are also carefully excluded from all court and public appointments.

By a recent return to Parliament the whole number of fellows was 113, of whom 60 reside in London; while the licentiates amount to 274, of whom 142 are resident in the metropolis.

The College of Surgeons, now considered, from its bye-laws and its selfish enactments, the most illiberal corporation in the kingdom, far exceeds its sister college in its monopolizing and exclusive laws. (Hear, hear.) This body is governed by a council of gentlemen who are self-elected, for life. It has been stated, upon respectable authority, that the members, or commonalty, recently amounted to 12,274; the bye-laws of the council exclude all those who are general practitioners (in other words, the great body of medical men in this country) not only from being councillors, but from having the remotest voice in their election, and prevent them from interfering, in the smallest degree, with the government of their own college. The councillors can only be chosen from among the consulting, or pure surgeons, who amount to about 100 in London, and nearly the same number in the large towns, but the latter are not eligible. By some legerdemain process, when a vacancy occurs, there are not generally more than six or eight persons who are considered by this pure college *actually* eligible, and should any of these be obnoxious from his liberal opinions, or conduct, he is instantly and for ever passed over, unless he turns traitor to his principles, and takes his seat in the council as the reward of his apostacy! (Loud Cheers.) But the acts of the council of this college would fill a large volume, and the curious in these matters are referred to the examination of its members, and to the appendix of re-

turns, as given in the 2d Part of the Minutes of the Parliamentary Medical Committee. A single question will aptly close this short account. Can this unparelled state of things be suffered to exist much longer? It would be insulting to the intelligence of the profession to require an answer.

As to the third estate in the realm of medicine, little need be said. The monstrous and absurd powers granted to the trading company of apothecaries of interfering with almost every member of the profession were almost thrust upon them by the jealousies and the impolicy of the Colleges of Physicians and Surgeons. These bodies either did not foresee or little bethought them of the extensive powers they were despising and allowing to escape out of their own hands, till they fell with the weight and force of a thunderbolt amongst the astonished apothecaries who were so much surprised when they awoke from their trance as the profession has since been. One of their late members states in his Parliamentary evidence that, "they (the company) had not *prepared* their minds for the extensive powers and duties the Act conferred upon them; in fact, it came upon them by surprise," &c. And the greatest source of surprise is that they have been allowed to retain them so long.

In making these remarks it is very far from being intended to throw personally the slightest imputation or reflection on the many distinguished and estimable individuals who composed these bodies. Of course they are not spoken of in their private, but in their corporate capacity, and in them is only shown the natural and unfortunate effects of irresponsible power—the rottenness of the whole system of medical policy.

These are samples of the fruits of some of the *primary* or *internal* evils, and most of the *external* or public grievances may be easily and fairly traced to the want of proper regulations, and of a just and liberal governing body. If wise and equal laws were enacted to protect the interests and respectability of the profession, if that fostering encouragement were afforded to medical science and talent, which ought to exist in a nation like this, and if there were properly-elected and responsible governing institutions for the members to appeal to; in other words, if what are now termed the three branches of the profession were comprehended in one general faculty of medicine, with the power of electing their own senators or council, we should soon have, as the legitimate and necessary consequence, a wonderful change in the aspect of medical affairs, and without this it is in vain to expect either unanimity, harmony, or friendly feeling. We should then see an uniform and extensive system of preliminary and professional education pursued throughout the empire, followed by theoretical, practical, and demonstrative examinations, and the conferments of a degree or title, which should be considered a licence to practise in any part of his Majesty's dominions. We should have no exclusively-recognised teachers or favourite schools of medicine, except, indeed, the favouritism of science, talent, and industry in teaching. We should have the great hospitals of the country purified from the present system of misgovernment and nepotism; the election of their physicians and surgeons would be by "concours," or public competition; these offices would be open to the talent of the whole profession, and the establishments themselves would be so regulated as to afford the greatest possible advantages for medical instruction, compatible with their primary object, the benefit of the sick poor. We should then have the honours and places of trust in the profession, accessible to every individual member. We should see the strong arm of the law, and the stronger still of public opinion, restraining unqualified and illegal practitioners; we should have quackery, with all its numerous ramifications, put down, or at least, greatly diminished, and the public protected from its many baneful effects; we should have the chemist and the druggist duly registered, after being examined as to his fitness for carrying on his business without endangering the lives of his fellow-subjects, by presuming to practise or prescribe; and, though last, by no means least, we should then have no set of officials daring to intefere with the rights and respectability of our profession; we should not have Poor-law Commissioners and their assistants endeavouring to control a class of gentlemen in all respects, at least, on a par with themselves; we should see their favourite system of pretended self-supporting medical clubs, of advertising far and wide for parochial surgeons, and of attendance on the poor by tender, fall to the ground; the members of the profession would be true to themselves; they would act under a sense of what is due to their own interests and dignity; they would resis

such degradations, and the attempts to saddle them with the medical expenses of the sick poor, by the offer of remuneration, in most cases so totally inadequate to the duties to be performed, and all this for the purposes of a mock-economy, and nominally (for it is only nominally) to save the pockets of the rich, a sum which, to each individual, would scarcely be appreciable. These evils could not exsit against the united voices and exertions of men animated by the one common feeling and desire of seeing their profession placed on the broad basis of *truth* and *justice*. It is hoped and believed that the statement of their grievances to Parliament, and their petitions for redress, could not long be unattended to; they would, no doubt, be treated with that respect, and meet with that attention, which their importance would desire. (Cheers.)

It is, then, for the atainment of these many important objects, and with these extensive views, that the BRITISH MEDICAL ASSOCIATION has been founded; and, in publicly promulgating its laws and regulations, its members take the opportunity thus afforded, of calling upon their medical brethren throughout the empire, of whatever title, rank, or standing, to unite with them in their zealous and anxious endeavours to procure that reform of abuses, and that salutary regulation and just government of the whole profession, so essential to its own welfare, utility, and dignity, and so necessary to the interests of the public. They feel it to be, however, of the utmost consequence that there should be a proper concentration of energy; that all efforts made should be duly considered, and well directed; and that an organized system of action should be promptly established, as the only method by which the desired results can possiby be attained.

The members of this association expressly disclaim any partial, narrow, or selfish views. They have no ends to serve for themselves alone; they are conscious of having only the welfare of their profession at heart; they wish to see it placed on the most respectable and useful footing in the eyes of the public, and they feel assured that by strenously advocating liberal and just measures for the good of the whole body, the wants, interests, and respectability of each department, and of each individual, will be thereby best promoted. They, therefore, hold out the hand of fellowship to other associations, of whatever name, or wherever formed, whose objects are wholly or partly the same.

The BRITISH MEDICAL ASSOCIATION is not intended to assume a literary or scientific character. Its members will, by their general measures, endeavour to improve the education, and promote the science and literature of the profession; but (at least for the present) they will neither hold scientific meetings, nor publish essays or transactions. In counties and districts these may form important and necessary features of similar associations, where medical men have fewer opportunities of meeting together, or attending societies for discussing professional subjects, and thereby communicating the fruits of their experience. But in the metropolis these opportunities offer abundantly, and such societies exist in most parts of London. It is, therefore, proposed that the British Medical Association shall confine itself chiefly to what may be called the *business* of the profession, for which its central situation, its contiguity to Parliament, its vicinity to the seat of Government and the colleges, with other circumstances, so well adapt it. The provincial associations, from their very distance alone from head-quarters, could not possibly conduct the negociations and numerous arrangements that must necessarily take place; but they may do much, very much, to promote the objects of this Association. They can contribute to the requisite funds; they can collect evidence and information as to the evils resulting from the laws at present affecting the profession; they can watch the working of the Poor Law Commissioners' schemes to degrade medical men; they can forward numerous petitions to Parliament; they may assist by their counsel and suggestions, in cases of doubt or difficulty; and they may greatly strengthen the hands of the Association by active co-operation, and by sending deputations to all public business, and on festive occasions. (Hear, hear.)

The present is considered a peculiarly favourable period for the union of liberal-minded men in all classes and departments of the profession, to endeavour to obtain the enactment of liberal laws and regulations. Not only is the profession itself daily becoming more convinced of the absolute necessity of medical reform, but this feeling has been strongly communicated to the Legislature and the Government. It is under-

stood that on the meeting of Parliament the Medical Educational Committee will be again immediately moved for, by its indefatigable and enlightened chairman, Mr. WARBURTON, so that further evi dence could be heard or communications could be made if deemed requisite. (Great applanse.) The attention of Government has been engaged lately on medical affairs, and it is believed that his Majesty's Ministers are willing to meet the wishes and wants of the profession, if these can be clearly and fully laid before them, and they can see their way through the mists and prejudices of the party feelings and misrepresentations which surround the subject.

In proof of this, reference might be made to the cordial assistance which the Government lately afforded to a highly talented and zealous member of the profession, and of the House of Commons, Mr. WAKLEY, (continued applause), in obtaining the Medical Witnesses Act, and for which the whole profession, disregarding party feelings, have expressed themselves as being so much indebted. (Repeated applause.) The promise also made to the same member, of "a Committee for inquiring as to the medical relief afforded to the Poor in the Unions," might also be mentioned.

But, above all, it is highly important to notice the great principle which has at length been recognized by the recently-granted charter of the University of London, viz. that degrees can now be conferred in this metropolis, and without reference to any religious opinion or distinction. Had the medical faculty of the Senatus been appointed wholly, or even in part, by the profession, or could its future members be in any way responsible to it, then the University would be the first step to a great end, for it requires but the power to license those whom it examines in medicine, surgery, midwifery, and pharmacy, and it would at once be placed on an equality with, and would eventually supersede, the present medical corporations, unless their constitution were entirely altered.

The Association is anxious to draw the attention of the profession at large to one peculiar feature mentioned in its laws and regulations, and which, if brought to act properly, it is hoped, would produce the most beneficial effects,—it is the institution of a "*Court of Honour.*" The want of this has been long and severely felt, and though it is a subject of much delicaey and no little difficulty, its *utility* has on all hands been readily admitted. If a breach of medical etiquette should occur between two medical gentlemen, or if in any way offence should be given or taken, or if more serious misunderstanding should arise, where can the aggrieved members apply, or to whom can they appeal? Certainly not to any of the existing professional bodies; they have neither the power nor the inclination to interfere. The law of the land does not recognize these matters, nor, if it did, ought it to be referred to. Where, then, can the appeal be so safely and honourably made by any member as to the bosom of his profession—to his own peers. The Association forms this court for its own members, but it is earnestly recommended to general attention as a medium for reconciling professional differences, for promoting honourable conduct towards each other, and for explaining misunderstandings, which, though, perhaps unintentional on both sides, yet might separate and divide honourable-minded men,

The formation of a benevolent fund for the assistance of decayed members of the profession, and their widows and orphans, is an object which the Association has also much at heart, and which is earnestly recommended to the attention of every medical man in the kingdom, but particularly to the affluent and more fortunate in their own ranks, and to the benevolent of all classes of society. The members of the Association are also respectfully requested to recommend it to the favourable notice of their richer patients. There is no profession, and few trades, in which so many objects of distress present themselves, and with so little ability on the part of the generality of their brethren to assist. The medical practitioner above many others, is exposed to disease and worn down with labour and anxiety —is ill paid at best, and often not paid at all,—when sickness comes, he is bereft of his income, and when death overtakes him his family is too frequently left in poverty and distress. It is stated on good authority, and is a lamentable fact, that a large proportion of medical men die in debt; yet, who are so useful as this class of men, or who are so great benefactors to the public? It is to be hoped then that the public will repay some part of the debt it owes to the profession, by liberally supporting the benevolent fund. It would be a de-

sirable circumstance if the different funds now existing could be united, so as to form one *national fund* on behalf of the whole profession.

In submitting the laws and regulations of the BRITISH MEDICAL ASSOCIATION to the profession, it is proper to state that they have been drawn up as nearly as possible in accordance with the sketch of the Society read by the chairman at the inauguration dinner. It is not presumed that they even approach to perfection, though they have occupied much of the time and grave consideration of the Provisional Council. composed chiefly of the gentlemen who were first instrumental in founding the Association. They have also been considered by other gentlemen eminent in the profession, and have, moreover, been submitted to the legal opinion of a distinguished barrister, that there might be a guarantee as to their containing nothing contrary to the law of the land. If, notwithstanding the care and trouble bestowed upon them, they should be found, in working, to be defective or erroneous, they are so constituted as to contain the principles of improvement, or even of regeneration, for they can be altered, or added to, at the general meeting in March.

It may fairly be asked, how can objects so numerous, and of such vital importance to the profession, be attained, or properly attended to? The answer must be in the maxim, "Divide et impera." It is proposed that the council should be numerous, In order that separate committees may be formed to manage the business of the various subjects which must necessarily come under the notice of the Association; and when a committee has duly considered and reported upon any given subject, it will then be submitted to the judgment of the whole council, or even referred to the sense of a general meeting. Thus, while any matter of business shall be closely and maturely considered by a few who may be thought best qualified for that particular subject, it will not want the attention or sanction of the whole.

In conclusion, the members of the Association again call for the active and vigorous co operation of their brethren, and they pledge themselves to use all the zeal, energy, and influence, they may possess, as individuals and as a body, to secure the objects they have in view, and which they consider will tend to promote the harmony, the welfare, and the respectability of the profession, and many of the best interests of the public. (Great applause.)

The following are some of the excellent rules drawn up for the Association, read by the Secretary:—

"Every legally qualified practitioner in medicine may become a member, on producing to the secretary satisfactory evidence of qualification.

"Every member on his admission shall sign the following declaration, in a book kept for this purpose, viz:--'We, whose names are hereunto subscribed, promise that we will obey the laws and regulations of the British Medical Association, so long as we shall continue members thereof.'

"If the member admitted should not be able to attend in person, he shall, by letter, authorize the secretary to sign the declaration on his behalf; and such letter shall be preserved among the papers of the association.

"No person practising any secret mode of treatment, and no proprietor or advertiser of any empirical nostrum, shall become a member of the association.

"Each member shall subscribe annually the sum of £1 1s. Subscriptions to become due on the 1st day of January in each year.

"Each member shall, on admission, pay a proportion of the annual subscription,--to be computed on the quarter day nearest such admission.

"If any member shall, on admission, prefer to pay the sum of ten guineas, or after having been six years a member, the sum of six guineas, above all arrears due, he shall be exempted from any future subscription.

"No member, whose annual subscription is six months in arrear, shall have a vote, or be allowed to take part in any proceedings of the Association, or be elligible to any office in it.

"If any member's subscription shall be six months in arrears, the secretary shall give him notice thereof, in writing; and if it continue unpaid at the end of three months from such notice, he shall cease to be a member of the Association.

"One third of every member's subscription shall be applied to the formation and support of a Benevolent Fund, for the purposes hereafter to be described.

"The president shall always be a general practitioner; he shall take the chair at all meetings, when present; and shall regulate the proceedings, preserve order, and enforce the laws of the Association.

"He shall state and put all questions at such meetings; and shall have a casting vote only.

"He shall also direct the summoning of all extraordinary meetings of the Association or Council; and shall sign the minutes of all meetings, after they have been confirmed.

"In the absence of the president, the chair shall be taken by the vice-president, then present, whose name stands highest in the lists. If all should be absent, then by the treasurer, by one of the auditors, or by the senior councillor present.

"The treasurer shall receive all monies due to, and pay all sums owing by, the association.

"There shall be elected annually, in September, a treasurer, three auditors, and 32 councillors. These, with the chairman of every County Branch Association (who shall, *ex officio*, be a member, if a general practitioner) shall constitute the council.

"The Council shall elect among themselves, a president, six vice-presidents, and a secretary. All these officers, and all councillors shall be, or shall have been, general practitioners.

"The Council shall meet (on every Tuesday, at first, it is proposed) at seven o'clock in the evening, Six members to be a quorum.

"An extraordinary meeting of the councill may at any time be held, by order of the president, provided the secretary shall have given notice of the time and object of such meeting to all its members residing within the metropolitan district.

"The Council shall have the power of regulating, until the next general meeting, the duties of any of the officers, when these are not accurately defined by the laws.

"The Council shall regulate all the expenditure of the Association.

"The Council shall have a discretionary power to take such steps for the suppression of quackery, and of the practice of medicine and surgery by unqualified persons, as the law authorizes, and as may seem to be expedient; and also may adopt such measures, in accordance with the general laws, as it may deem necessary for the preservation and extension of the rights, privileges, and immunities of the association, and of its members; and for the support of the honour, welfare, and respectability of the medical profession.

"If any member be aggrieved by the practice of a person not legally qualified, or by the institution of any unjust prosecution, action, or or other legal process against him, he shall send his complaint, with the best evidence he can procure, to the secretary, who shall submit it to the next meeting of the Council, who shall be empowered to employ legal assistance for the protection of the member.

"The election of the Council shall take place one or two days previous to the anniversary, by ballot.

"The secretary shall attend all meetings of the Association, and of the Council; he shall takes minutes of the proceedings, and enter them in books kept for the purpose.

"He shall send all notices of meetings, &c., under the direction of the President and Council, and shall receive all communications respecting the Association, and lay them before the Council.

"In the absence of the secretary, a member shall be appointed to act as secretary *pro tem.*

"A solicitor shall be elected by the Council, to be an honorary member thereof, but shall not have a vote at any meeting.

"He shall attend when summoned, to advise the Council in all legal matters.

"He shall only be removable at the discretion of the Council.

"He shall be paid all the necessary expenses which he may incur, under the direction of the Council, on behalf of the Association.

"The president shall at no time preside more than two years in succession. All the other officers may always be re elected.

"There shall be two general meetings in the metropolis, every year; the first on the Monday preceding the 25th day of March, and the second (the anniversary) on the 30th day of September. The first, for making alterations of the laws, and the transaction of business. At the second, the result of the ballot for the Council shall be declared; a general report of the state of the Association shall be presented from the Council; and a financial one from the udiitors, &c., &c.

"Twenty members may at any time convene a general meeting.

"At the anniversary meeting the members and their friends shall dine together.

"After every meeting of the Council, an ordinary meeting of the Association shall be held at nine o'clock P.M. for the admission of new members, and such other business as the Council may direct.

"The Council may at any time resolve itself into a Court of Honour, to investigate all matters brought before it of personal complaint, breaches of etiquette, misconduct, or misunderstanding that may arise between the members.

"The Council shall endeavonr to promote the formation of Branch Associations, and district committes, in every county, city, town, and district of sufficient importance, throughout the kingdom, beyond the limits of the metropolis. Each member of a Branch Association shall be considered a member of the British Medical Association, and shall pay annually, on the first of January, the sum of £1 1s. to the treasurer of his branch; one half of which shall be transmitted to the general fund of the Association; the other half shall be retained to defray the necessary expenses of the Branch Association: the surplus, if any, to be appropriated annually to the general fund.

"No Branch Association or district committee shall commence any prosecution, or enter upon any procceding of importance to the general body, without having first obtained the sanction of the metropolitan Council, or of a general meeting of the Association.

"Communications shall be held with the various Branch Associations and district committees, when necessary, on any matter of business, and an annual report shall be made by each such Branch Association, or district committee, and transmitted, in the first week of August, to the secretary of the Association.

"A collector shall be appointed by the Council, and shall be allowed a poundage upon all collections made by him.

"He shall procure securities for the faithful performance of his duties, as shall be satisfactory to the Council.

"He shall keep an account, in a book provided for the purpose, of the subscriptions paid by the members of the association, and shall pay over to the treasurer, monthly, such sums as he may have received.

"He shall make a list every six months of all subsciptions in arrear, and shall deliver the same to the secretary.

"He shall send to the treasurer, before the first meeting in every month, an account of all the receipts, resignations, &c., since his last report.

THE BENEVOLENT FUND.

"A Benevolent Fund shall be established, for the purpose of affording relief to decayed members of the medical profession, and to their widows and orphans.

"Three trustees shall be appointed by a general meeting, to hold the Benevolent Fund in trust for the purpose intended; and all investments shall be made, all securities taken, and all stock purchased, in the name of the trustees for the time being, according to the discretion and under the controul of the Council, which shall have the management and disposition of the subject matter of the trusts.

"If any trustee shall become bankrupt or insolvent, or from any other cause become incapable of well and duly performing the duties of the trust, he shall cease to be such trustee accordingly; and if the Council at any time see cause to remove any trustee, on the ground that he does not well and truly perform the duties of the said trust, he shall, upon a declaration of the Council to such effect, cease to be a trustee; and when, from any of the aforesaid causes, or by death or otherwise, the nuber of trustees shall be less than three, the Council shall fill up the vacancy, subject to the approbation of the next half-yearly general meeting.

"No relief shall be afforded to any person from the Benevolent Fund, until it shall amount to £2000."

The London Medical
AND
Surgical Journal.

Saturday January 28, 1837.

THE NEW METROPOLITAN UNIVERSITY.

In framing the Charter of the Metropolitan University little difficulty could occur in determining the general principles on which it should be constituted. Its first and great object, was to grant degrees to all entitled to such honours,

wheresoever, or from whomsoever they may have acquired their knowledge.

To organize a University on this broad principle, must, it it evident, materially interfere with the interests, and destroy the monopoly of the old-established Institutions. It therefore became a task of no small difficulty for the Chancellor of the Exchequer to select individuals to carry on the objects of the New Institution, but who at the same time had *no* interest in supporting the old corrupt establishments.

In order that the Government might have it in their power, *publicly* to declare, that certain individuals who held a prominent position in the medical profession, and who not being TEACHERS, were fully qualified according to the letter of the law of the NEW UNIVERSITY, to be eligible as members of the MEDICAL SENATE, were offered a place in that body, though it was fully anticipated, that they would reject the terms. The Chancellor of the Exchequer, thus extricated himself in forming the Medical Senate, from those individuals, who by their position and habits, would have materially encumbered the machinery, or might even have frustrated some of the more liberal and wise purposes, for which the University was to be established. It was indeed by this *tour de maitre*, that the Chancellor of the Exchequer was enabled to make a selection of individuals, unconnected with the old corrupt institutions, and with their recognised schools, and to form a body of examiners consisting of general practitioners—*pure* Surgeons and *pure* Physicians, as well as individuals of different religious sects.

It is well known that when the suggestion was first made to Sir Astley Cooper, to become a member of the New Senate, he was earnestly solicited, nay imprecated, *not* to quit his beloved friends in Lincoln's Inn-Fields, as such a step could not fail to ruin their fraudulent system of granting diplomas, and deprive the examiners of a large income, which to some of them the worthy baronet was assured, was their chief means of support.

Sir Benjamin Brodie, much as he may have desired to have his name brought forward as one connected with a *liberal* and national establishment, could not, with all his flexibility, extricate himself from the meshes of the net that was woven around him, and into which he was entangled by the "Fraternity" in Lincoln's-Inn-Fields. Mr. Green's position was no less vexatious. Having retired from King's College, disgusted and disappointed with his surgical chair in that institution, it would have been a great solace to a man of his love for distinction, and a gratifying tribute to the memory of "my uncle Cline," who was a great supporter of all that was *liberal*, unless in the government of the rotten borough of Lincoln's-Inn-Fields, to have got himself enrolled as a member of the New Medical Senate. In proof however, of his *adhesion*, the Ex-Professor Green left his case to the will and decision of the Council, whose verdict on this occasion can easily be imagined.

It is generally understood, that a proposal was made to Mr. Lawrence whose well-known name, *some* might have anticipated would have been, in the list of the New Senate; but independent of his being a Teacher, the *destructive* principles which he had so long publicly avowed, to all constituted authorities and the *religious* doctrines which he had unscrupulously promulgated, must have led a government, however liberal, to have been cautious in admitting such an individual within the walls of a Christian establishment, however prudent and wise it may have been to have admitted him

amongst the pious Council of Lincoln's Inn-Fields. There his *ultra* liberal sentiments and conduct, would have no avail as one of such a profligate assembly, yet it would have been too bold, and perhaps a step too perilous, to have admitted him as a member of the New University. His *destructive* talents would have had a scope in the organization of a new institution, which they would not be permitted to exercise amongst the old monopolists.

By excluding all *Teachers* from the New Senate, and by obtaining the *refusal* of some of the most *eminent* of the monopolists of the ruling bodies of the College of Physicians as well as of the College of Surgeons, an important step was gained in framing the New Charter; but the Chancellor of the Exchequer had a difficulty of much greater magnitude yet to overcome. It can be readily imagined, how bewildered and perplexed he must have been, to reconcile the conflicting opinions, by which he was interrupted on every step, and from the contradictory views which each contending party entertained, not as to the benefits of the Institution to society, but of its influence in destroying monopoly, and injuring those, who had calculated on benefitting by an uninterrupted continuance of the old system of Medical Government. Besides as it was probable, that before the University could be brought into operation, it would be requisite to apply to the Commons for a GRANT OF MONEY towards its support, the Chancellor of the Exchequer was bound to consider, how a charter would be framed, the materials of which, should not meet with the combined opposition of the three great political parties of which the House of Commons is composed.

It is quite clear that the Whig-Radical Government, whatever may have been its real intentions, did not feel sufficiently strong openly to bestow on the nation, a Chartered University, unfettered by all the trammels, and unstained by all the bigotry of the old Monkish Institutions. It is ungenerous to suppose that Mr. Warburton, after all his toil and unwearied zeal, in dragging and exposing before the British public, the lamentable and no less degraded state of our Medical Corporation, did not contemplate, and does not still entertain the hope, that the day is not far off, when he will be able to crush the present system of Medical Education and Practice; but such is the constitution of things, and so enormous has been the growth of the tree of corruption amongst our corporate bodies, that it is no easy matter for any government, however anxious it may be for the amelioration of so important a branch of the state, to found a new institution, which shall at once, annihilate the existing authorities. Mr. Warburton and his friends are therefore bound to consider the draft of the Charter of the New University, as a pledge from the Government of its earnestness to remedy *some* of the most serious grievances, which afflict the Medical Profession.

As we have already mentioned in a former number of this Journal, it does not require a Solomon to detect some imperfections in the New Charter, but we ought to recollect, that these have been introduced, not from the *ignorance* of the Chancellor, but must have arisen from his having been *compelled* to mix up a certain quantity of *rotten* materials in the fabric of the New Institution, and whilst he has done thus, he has taken ample care to provide the Members of the New University, with powers sufficient to render the Institution, an ornament as well as a blessing to the community.

Some indeed have expressed their asto-

nishment that *two* schools only should have been nominated in the Charter, and that one of these which have merited this distinction, should contain the largest, and the other almost the smallest, number of Students of any of the Metropolitan Schools of Medicine. But if it was conceived prudent to nominate anyone school more than another, the nomination of the *mock-liberal* Joint-Stock Company's Establishment in Gower-street, and the *ultra-tory* Joint-Stock Building Company in the Strand, the Government could not perhaps have contrived a more *safe* mode of mitigating the hostile feelings, which the Governors of both these Institutions must naturally feel to the establishment of the Metropolitan University; each of these Companies having used every effort to obtain for themselves the power of granting Medical degrees.

Long before this New Institution can come into operation, the public will be put in possession of the *liberality* with which it intends to act, in conferring its honours, and no one has any good reason to doubt but that these honours will be conferred on *all* those who may sue for them, from wheresoever he may come—from whomsoever he may have acquired a competent professional education, and whatever may be his religious belief.

In effecting these desirable purposes, we will only be following the march of the Medical Institutions in all the other parts of civilised Europe. We will at once overthrow the fraudulent systems which are now resorted to, at all the Universities of this country, and of obtaining from foreign Universities, Medical degrees in order to get admission within the hallowed walls of the College of Physicians; and we will also overthrow and destroy that system of extortion to which the Medical Student is exposed by the College of Surgeons, and the Company of Apothecaries, before he can become a candidate for admission in these Sanctified Corporations.

REVIEW.

Facts and Cases in Obstetric Medicine, with Observations on some of the most important Diseases incidental to Females.

By J. T. Ingleby, M. R. C. S. L.,

Senior Surgeon to the General Dispensary, Lecturer on Midwifery at the Royal School of Medicine, Birmingham, &c.—Longman & Co.

(Continued from page 599.)

The next subject considered by Mr. Ingleby, are the periods of the occurrence of convulsions, and these will be perused with interest by most readers.

"*Periods of occurrence.* — Puerperal convulsions are noticed at four particular periods: 1st, during pregnancy, and prior to the accession of labour; 2nd, during labour; 3rd, after the birth of the child, before the detachment of the placenta; and also from portions of placenta remaining in utero after disruption; 4th, after the complete expulsion of the placenta. It has been said that convulsions, which take place antecedent to labour, cannot strictly be denominated puerperal. Convulsions, it must be observed, rarely occur before the completion of the seventh month of pregnancy; but should they arise in the early months, they may unquestionably, depend upon the state of the uterus. Convulsions have occurred in the second month; and in two cases related by Perfect, the attack preceded quickening: but, at these early periods, they are rarely attended with danger. With respect to this occurrence in the last month of gestation, although the paroxysm mostly appears during the actual dilatation of the os uteri, or on the first approach of labour, still, when we recollect that in the last week or two of pregnancy the neck of the uterus is fully developed, the subsequent changes being confined to the os internum (the most sensitive part of the organ) it cannot be surprising that, in very irritable persons a serious impression should be made upon the brain at those periods. When arising prior to the accession of labour the attack is almost invariably preceeded by derangement of the sensorial functions denoted by some of the following symp

toms : drowsiness ; a sense of weight in the head, especially in stooping ; beating and pain in the head ; redness of the conjunctivæ ; numbness of the hands, flushing of the face, and twitching of its muscles ; irregular and slow pulse ; ringing in the ears ; heat in the scalp ; transient but frequent attacks of vertigo, with muscæ volitantes, or temporary blindness ; derangements of the auditory nerve ; embarrasment of mind and speech ; an unsteady gait, constipation, and œdematous swellings. There is sometimes pain in the epigastrium—a very characteristic symptom, vomiting, and other marks of gastric disorder. It is also said that a sense of weight and pain has been experienced in the hypogastric region. Restless nights, when associated with thirst, feverishness, and deranged circulation, have not unfrequently proved the precursors either of apoplexy, convulsions, or hæmorrhage at the close of pregnancy, or a morbidly increased action of the cerebral vessels in the puerperal state. A very healthy looking young woman (in whose several pregnancies, three in number, these precursory symptoms were strongly marked) fell a sacrifice to cerebral inflammation, so late as the third week after delivery. Possibly the previous attacks had induced some slight change of structure in the arterial system of the brain.

The premonitions already described, though in some instances scarcely cognizable, are in others very clearly marked ; and justify the injunction of prudent moral and physical restrictions. Even under a strong predisposition to convulsions, the attack may generally be prevented by bleeding, daily laxitives, a simple diet, and mental quietude. Whenever a woman has been the subject of puerperal convulsions, the necessity for adopting these precautions in a subsequent pregnancy, especially towards its termination, and for maintaing tranquility of the circulation, must be obvious. When the lower extremities become materially œdematous in the latter months of pregnancy, in women of unimpaired constitution, Dr. Hamilton confidently declares that 'copious bleeding alone prevents the occurence of convulsions, either before or during labour.' Denman, again, speaks in commendation of bleeding, in the following terms : 'bleeding is known to lessen, in a very material manner, all the complaints in pregnancy which arise from uterine irritation. It is, therefore, I may say, universally recommended in all cases where these convulsions exist, or are to be apprehended.' Generally, however, as depletion is now practised, its efficacy in removing the paroxysm, and permitting gestation to proceed, is either not acknowledged, or not yet estimated according to its high and practical importance."

Few obstetricians will dissent from the opinions of such high authorities as Dr. Hamilton and Dr. Denman, yet every observant practitioner must admit that there are cases of convulsions in nervous and hysterical women which will yield more readily to antispasmodics and sedatives, than to depletion, a fact well illustrated by Mr. Ingleby in a subsequent part of the article before us.

Our author lays much stress on the premonitory symptoms to the disease under notice, and these are always carefully watched by practitioners.

" Premonitory symptoms are rarely observed in the convulsions of labour. Excessive restlessness, however, may be considered as the harbinger of an approaching fit. It is said that rigors and delirium have also been noticed. I am not here alluding to a mere incoherence which occasionally appears during the dilatation of the uterine orifice ; a fact familiar to most observing practitioners, and familiarly noticed by a very eminent writer, Dr. Montgomery ;* an attack so transient in duration, and unimportant in character, can scarcely be confounded with more serious conditions of the brain. The indications of attack after delivery are still less apparent, and perhaps no cause can be assigned in addition to an overloaded state of the bowels, except turgidity of the blood vessels.

Convulsions under such circumstances, are considered, by Dr. Ramsbotham, as peculiarly fatal in their consequences : a conclusion at variance with my own more limited experience, and also with the observations both of Velpeau and Collins."

There can be little if any reliance placed on the premonitory signs abovementioned, nor even upon the severe pain in the head, considered almost pathogromonic of convulsions by Dr. Hamilton, as we have known convulsions occur without any of these premonitory signs, and we can also state that the disease is by no means as fatal as some writers suppose. We now arrive at the

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* See Dublin Journal of Medical and Chemical Science, No. XIII. Vol. V. page 53.

account of anæmic eclampsia which is very graphically detailed.

"As regards the anæmic form of eclampsia, I may briefly observe, that convulsions which result from hæmorrhage, and succeed syncope, are not only more dangerous than the other forms, but often far more violent than we might, *a priori*, suppose. The symptoms which characterise this class of convulsions, are —contortion of the muscles of the face, whilst those of the extremities are but little affected; attacks of syncope; a small and frequent, but sometimes slow pulse; collapse of the features; coldness of the extremities, and an exsanguine countenance. A similar seizure, though milder in kind, now and then occurs at the close of a very tedious labour, and is merely an evidence of exhaustion. These diagnostic marks are the reverse of those which characterise convulsions in contrary states of the system. In cases of exhaustion, the ergot of rys, henbane, camphor, and musk, together with ammonia, aromatic confection, and other stimulants and cordials, are suitable remedies; but opium is the grand restorative; its agency in sustaining and equalizing the circulation, and subduing spasm, places it almost beyond value. In the interval between the paroxysms, it may possibly be necessary to perform transfusion. The head should be maintained in a low position; sinapisms applied to the feet; and stimulating liniments rubbed in the course of the gastric and cardiac regions. Nourishing broths, taken by the mouth, and injected into the bowels, will be highly proper; and should the œsophagus be paralyzed on the convulsions subsiding, the elastic tube must be had recourse to. In the event of the question of delivery arising, the directions laid down elsewhere will be strictly applicable.† The paroxysm of genuine eclampsia cannot be attended with any deception, on account of its great peculiarity. The attack occurs suddenly, and, from its terrific character, occasions the greatest alarm and confusion. The patient, if in the erect position, suddenly falls to the ground; sometimes with a shriek, and perhaps an immediate discharge of liq. anii. During the continuance of the fit, the determination of blood to the head is very manifest, by the throbbing of the carotid arteries; the distension of the superficial veins of the head and neck; the injected state of the conjunctivæ; and the swolen and almost purple state of the upper part of the body. The patient is insensible to external impressions; the limbs are very rigid, alternately flexed and extended, occasionally agitated by spasmodic twitching, the trunk is thrown backwards, and the abdominal viscera most violently compressed; the face is distorted; the mouth drawn aside and in constant motion; the teeth are forcibly set together, emitting the hissing noise spoken of by Mr. Denman. In rare cases, the mouth has been observed to remain open. From the spasmodic contractions of the jaw (which has ever been luxated by their violence) the tongue is generally wounded, and saliva, tinged with blood, issues from the angles of the mouth. The respiration is hurried and irregular, having occasionally long suspensions; there is a rattling noise in the throat; the eyes are wild, fixed, and open, leaving the white part only in view —sometimes they open and close, and turn round, with great rapidity — the pupils are dilated, and, when the fit continues long, insensible to light; the breathing is stertorious; the sleep profound; the pulse labouring, slow, hard, and full, with intermissions, but usually it soon attains a great degree of frequency and quickness; and the sphincter of the bladder, and sometimes that of the rectum also lose their power. The duration of the actual fit is commonly about a minute, or even less; it varies, however, from one to five minutes or longer; recovery from the fit is sometimes momentary, and sighing usually announces the return of natural respiration; but too frequently one fit is followed by another, indicated by a diminished frequency of the pulse. When the paroxysm frequently occurs, the deprivation of sense is, for the msst part, permanent. The number of fits is almost indefinite. When the fit arises during actual labour, the convulsion may regularly recur with the return of pain; and, on the fit subsiding, the patient stares in a wild and vacant manner, and, though unconscious of what has happened, is either perfectly calm and rational, (a most favourable feature,) complaining of pain in the head and perhaps in the epigastrium, or otherwise falls into a comatose state. The return of sensibility may be instantaneous although it is for the most part gradual, corresponding, in this respect, with the subsidence of the fit. There is, in this

† See the author's Treatise on Uterine Hæmorrhage, pages 152-5.

case, a confusion of the senses; the articulation is at first defective, and vision imperfect; indeed, both the optic and auditory nerves have been known to undergo a temporary paralysis. The expression of countenance, also, remains very heavy, and the face continues swoln. When the result is not fatal, the intellect remains unimpaired in the great majority of cases It appears singular, on reflection, that the functions of the brain shall present such contrarieties of character within the very shortest period :* at one time the patient is agitated by a convulsion inconceivably frightful, and speedily recovers; at another she lies motionless and senseless, having the apoplectic stertor, or possibly breathing with tranquility; and, on recovering speech and motion, the mental disturbance varies in degree from the slightest incoherence, or loss of memory, to the greatest rhapsody. At this juncture, the connexion between this state and puerperal mania is so striking, that the most sagacious practitioner, if ignorant of the previous symptoms, would probably be deceived. I am aquainted with several cases of puerperal convulsions, which were succeeded by puerperal mania; the transition might, probably, be the result of the large bleedings which were necessary to subdue the primary disease. The patient may die in the first fit, or after the occurrence of a great number of fits. Death rarely occurs just at the close of the paroxysm, but in the coma which succeeds it, or rather after asphyxia consequent upon the deteriorated state of the pulmonary function, of which the purple state of the skin is so characteristic."

Every observant obstitrician must applaud the accuracy of the preceding extract, and arrive at the conclusion that there is a form of convulsions dependent on want of blood, for which depletion is not the remedy. We also meet with cases in dejected nervous women, who have become illicitely pregnant, and who have been deserted by their seducers, or discarded by their friends and acquaintances. In such cases depletion is not the remedy, though so universally advised by the high authorities already mentioned. This leads us to the pathology of the disease.

Pathology.—It has been shewn by pathological research, that increased vascularity and turgescence of the meninges, veins, and sinuses of the brain, prevail in the great majority of these cases. Connected with extreme fulness in the cerebral vessels, Denman found that the heart was usually flaccid. An effusion of serum between the arachnoid membrance and pia mater, and also in the ventricles, (according to my own observation,) is the morbid appearance most frequently met with. It has been remarked that this appearance is not peculiar to disease; and that, in animals who are bled to death, an effusion of limpid serum is not only an ordinary result of the depletion, but that its amount will be in exact ratio to the escape of the blood, and the period occupied in dying, whether the mortal agony be momentary or protracted: in the latter case, the amount of the effusion being greatest. Dr. Seeds, whose experiments seem peculiarly applicable to this subject, remarks, "If an excessive quantity of blood be lost, either from an artery or vein, water is effused within the brain." Although as these experiments seem to prove, congestion and effusion may be *produced* by venæsectio ad mortem, yet, as the revewer observes, "a state the very reverse is produced by moderate venæsection,"* properly timed. The intention of bleeding in convulsions is to lower action, not to exhaust the body.

Blood has also been found extravasated both within the cranium and the theca vertebralis. In many instances the morbid changes have been disproportionate to the violence of the attack, whilst in others no unusual appearances, either in the spine or any other part of the body have been detected. Bloody points have sometimes been discovered on making a section of the brain. "In some cases," observes Ramsbotham, "the blood-vessels of the pia mater have been found visibly surcharged, whilst those supplying the medulary and cortical part of the brain have appeared almost bloodless."† It has been remarked, that many of the appearances of vascular turgescence which have been observed in the brain and spinal chord, are the mere accidental effects of the violent struggles of the pa-

* See Dr. Parry's remarks on the effects of impetus of blood to the brain, in the first volume of his posthumous works.

* See Medico-Chirur. Jour. and Review, for January to June, 1836.

† 473 Cyclop. of Practical Med. p. 249.

tient in her last moments; the same as appear in all cases of violent death. In this view of the case, the injected state of the cerebral vessels may be compared with the blood-shot eye, and the œdema of the eye lid, occasioned by the struggling in a severe fit of chronic epilepsy; still, the turgidity may be explained by other causes. Rammollissement of the brain is said to be an occasional result of the convulsive paroxysm. The uterus has generally, I believe, been found in a natural state; portions of decomposed placenta and marks of abdominal inflammation have occasionally been detected. The spine has been found congested, and occupied by effused blood and serum."

Additional antopsies are wanted to establish the true pathology of convulsions, and we must receive with due caution, the results of the few dissections which have been as yet recorded. The correctness of this opinion must be apparent to all acquainted with the records of morbid anatomy. The conclusion is, however, as represented by our author. He next gives an account of the prognosis, which deserves attention:

"*Prognosis.*—To give an unqualified opinion in favour of recovery, even in the mildest cases of genuine puerperal convulsions, would be most imprudent, considering the liability of the paroxysm to recur. It has been already observed, that the attack which appears during the progress of labour is attended with comparatively little danger; whilst the paroxysm which arises either antecedent to labour, or subsequent to delivery, and is marked by frequent returns, and an intervening coma, is inseparable from danger, and that, proportionate to the suddenness, frequency, and violence of the attacks. and the profundity of the coma. The danger to be apprehended from convulsions which follow large effusions of blood, will be in exact ratio to the enfeebled state of the sensorium. In all cases, therefore, our prognosis must be regulated by the particular circumstances under which the convulsions may arise.

We now come to the treatment, which is well described by our author. This consists in copious depletion in the sthenic form of the disease, active purgation, nauseating doses of tartarized antimony, and a free use of opium or morphia, more especially after depletion, and when the fits continue after delivery. With respect to opium, Dr. Hamilton has denounced it, while M. Velpeau observes that it neither merits all the good nor all the ill which has been said of it. Dr. Collins has found it highly beneficial when the fits continue after delivery. In addition to these means, cold to the head mustard poultices to the feet and legs, the hip both, cold being applied to the head at the same time, are useful adjuvants. It is also advisable to keep the head in an elevated position. Cold applications to the head are also beneficial. Much stress is lately placed upon pouring cold water from a short distance and in a moderate stream over the head and face in convulsive diseases, but we are certain that the efficacy of this remedy has been greatly exaggerated by some British authors. Mr. Ingleby does not appear to place much reliance upon it from personal experience. He notices touching the epigastrium, applying cold to the abdomen, emetics, enemata, &c., which are of minor importance. He observes, "the French authors coincide in opinion with our own, in referring one form of convulsions to sympathetis irritation, and advising sedatives."

A most important part of the subject is next considered, namely, the propriety of delivery when convulsions continue after all remedies have failed.

Mr. Ingleby quotes the opinions of the best obstetric writers of ancient and modern times, and then offers his own. All agree that labour ought to be induced, if the orifice of the uterus is dilated, or dilatable; and to expedite this process, they puncture the membranes. It does not always happen, however, that parturition immediately succeeds the rupture of the membranes in the early months of pregnancy, indeed it may be delayed for hours, and though the fœtus is expelled the woman does not recover. In such pregnencies the cervix uteri will not have undergone its proper developement. It is also a melancholy truth, that in numerous instances death has speedily followed artificial delivery, but in others the fatal event has not been immediate. Dr. Hull remarked to Professor Burns that in every case which terminated unfavourably, there was no dilatation of the os uteri, and consequently no labour. The rule of practice hitherto laid down is, that when all means fail to stop the convulsions, the os uteri ought to be dilated, if dilatable, and the membranes ruptured. But when the neck of the womb is hard, undeveloped, and undilatable, what practice is to be pursued? Forcible dilatation is considered dangerous by most obstetric writers, and this is a judi-

cious conclusion. Are we to follow the advice of those who recommend that one or more incisions should be made through the vaginal portion of the cervix uteri—an operation performed several times with success? This practice is not followed in this country. Our author concludes this chapter with an account of the various modes repecting delivery, which we need not transcribe. We have now given the reader an ample opportunity of judging of Mr. Ingleby's work as a practical treatise, and we anticipate his favourable opinion of it. No one can peruse it without the conviction that it evinces great research, careful observation, and solid judgment. It is a valuable production, replete with practical information. We predict that it will be a work of reference and authority.

WESTMINSTER MEDICAL SOCIETY.

Dr. Williams in the Chair.

After the admission of a new member, no special business being before the meeting, the chairman requested the communications of members upon any interesting medical subject, which may have occurred to them since their last meeting. Mr. Bennett Lucas presented the genito-urinary organs of the unfortunate female whose mutilated remains were found some time since at Paddington, and about whom such an intense interest has been created in the public mind. Mr. B. L. said that it was not his intention in laying the parts before the society, to excite any discussion upon the question of how the individual met her death, notwithstanding that some difference of opinion existed amongst the journals in which the account of the coroner's inquest appeared. Any misconception upon this point being most satisfactorily cleared up by the head and neck of the individual being since found, the examination of which left no shadow of doubt to the meanest capacity, but that she was murdered. The able and intelligent manner in which Mr. Girdwood, the medical gentleman in whose professional avocations the case occurred, had drawn up the report, left nothing to be further desired, and it was to the kindness of this gentleman, that Mr. B. L. was indebted for being made the medium of communication between Mr. Girdwood and the society, upon the present occasion.

In exhibiting the preparation, Mr. B. L. remarked that the external genital organs were scantily developed; the labia and nymphæ were not half their natural size; and the clitoris corresponded in proportion. The mons veneris was fully developed; but a soft down supplied the usual quantity of hair found upon this part, whilst the external labia had a few scattered strong hairs along their course. The canruculæ myrtiformes bounded the orifice of the vagina, the mcuous membrane of which canal was slightly lacerated upon its under surface, which was to be attributed to the handling of the parts after death, and not to injury during life. A portion of the vagina upon its left lateral aspect was removed, in order to exhibit its termination, which ended two inches and a half from the orifice in a cul-de-sac. From this abrupt termination of the vagina to the natural situation of the uterus, a flat membranous band existed, the posterior termination of which was thick, and of a fibro-cartilaginous hardness. This body, about the size of an almond, was cut into, but no trace of resemblance to an uterus was to be detected. The Fallopian tubes were of their usual length, presented the fimbræ, but were impervious. The ovaries were imperfectly developed; one was not interfered with, and had attached to it, by a slight neck, a small vesicular body; the other was cut into, and presented the appearance of a fibrous tumour. The mammæ, which were not before the society, had undergone a practical examination: they were well developed; but Mr. B. L. did not wish to offer any observation upon these glands until they had undergone further examination, and would take the earliest opportunity of laying before the Society the result of their examination, as he anticipated the opinion of Sir Astley Cooper upon their origanization. The axillæ of the female were devoid of hair, and in her muscular developement she was decidedly masculine.

An interesting fact unconnected with the preparation before the Society, Mr. B. L. wished to state:—The jejunum was filled with chyme, and the lacteals distended with chyle, was thicker in its coats than is usually met with in the examination of this intestine in the dissecting room, was of a lightish pink colour, and studded along its course by several dark venous ecchymoses about the size of a pin's head. These

were contained in the submucous cellular tissue, and were surrounded by a high arterial zone; the integrity of the mucous membrane being perfect. This appearance being questioned at the examination, whether it was the result of sudden death during the occurrence of digestion in the jejunum, or the effects of disease, was a matter of some interest. Mr. B. L. expressed it to be his opinion, that, taking into consideration the exsanguinated condition of the body, and the perfectly healthy state of the organs examined, he had little doubt but that the sudden death of the female, during digestion, when the capillaries were distended, disturbed the balance of power between the nervous supply and these vessels, and that a rupture of the latter was the consequence.

Dr. Chowne asked if Mr. L. had examined the spermatic arteries, and if they pursued their usual course; also, if a cut was made in the side of the vagina, or a portion of the canal excised.

Mr. B. Lucas.—The time allowed us for examination did not permit an investigation into the state of the spermatic arteries, the body was completely exsanguinated. A portion of the lateral wall of the vagina is removed in such a manner that its extent can be ascertained without injuring the external orifice, or the termination in the cul-de-sac.

Mr. Henry Johnson said he had examined numerous animals which he had killed whilst digestion was going on, and had invariably found the appearances which Mr. Lucas described as being presented by the jejunum in this case. He conceived Mr. Lucas had accounted most satisfactorily for the existence of the ecchymosis, but he had never observed such in the animals he had examined.

Mr. Toynbee asked if Mr. Lucas had examined the intestinal glands, and if the ecchymosis corresponded to their situation, and if not, at what part of the circumference of the intestine they were present.

Mr. Lucas replied, that if an inch of the jejunum was selected, seven or eight of these spots would have been found, following no regular order. If they were dependant upon the termination of the arteries to the intestinal glands, and vascular *patches* would in all probability have been detected in the glandulæ aggregatæ.

Mr. H. Johnson said, that no organ presented greater variety in the female subject than the clitoris. In examining this organ at St. George's Dock, he found it of various sizes in several individuals, whose ages were nearly equal, and whose avocations were similar.

THE INFLUENZA.

Dr. Johnson stated, that he treated the prevailing epidemic by attention to the bowels in the first instance, with a view to relieve the headache and other febrile symptoms; after which he treated it by antimonials.

Dr. Addison feared that this disease was thought to be less fatal than it really was. He stated some cases which occurred to him in hospital practice which terminated fatally, the patients being affected with universal bronchitis, and thought that the *airy* condition of an hospital ward was most prejudicial to its inmates labouring under the epidemic.

After some other few observations, the Society adjourned.

TO CORRESPONDENTS.

If a Pupil of St. George's will confidentially favor us with his name, we shall feel it our duty to admit his letter. Unauthenticated, we cannot do so, as he must perceive that *others* besides the "Baronet" will be implicated in the "low intrigue," respecting the "anticipated appointment" to which he alludes.

X. Y. Z. may safely enter into the partnership. The Apothecaries' Company has no power to interfere in the business. 300*l.* is too much; the usual way of making such a bargain is to give two years' purchase: this is never exceeded unless the practice is long established, and a longer introduction given than that specified.

Senex.—The postage of the letter in all probability was not paid, as it has never reached us.

W. W.—Time only can correct the abuse. We would on no account make a stir in the business at present.

If A Pupil looks into Andral's Pathological Anatomy, translated by Messrs. West and Townsend, he will find, at page 538, Vol. 2, a similar case.

Charing Cross.—Mr. Partridge is, we believe, only an assistant or visiting surgeon. The hospital is not recognized by the College of Surgeons.

All communications and books for review to be forwarded, carriage paid, to Dr. Ryan, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

ROYAL

THE

London Medical and Surgical Journal.

No. XXIII. SATURDAY, FEBRUARY 4. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. VIII.

Absorption.

Commencement of Veins and Lymphatics.---Open Mouths of these Vessels an Assumption.---Absorption a Vital Process.---Ancient Opinion that the Veins absorbed.---Remarks of Hippocrates.---Fluxus and Refluxus of the Blood.---Office of the Lacteals.---Discovery of the Thoracic Duct.---White Veins.---Researches of Musgrave, Lyster, Haller, Meckel, Hewson, Munro, and Magendie.---Arguments in favour of Venous Absorption.---Universal Distribution of Veins.---Foreign Bodies in the Veins.---Magendie's Celebrated Experiment.---What it did, and what it did not prove.---Continuance of Life, after tying the Thoracic Duct.---Action of Poisons.---Do they act by Absorption or by Sympathy?---Analogous Effects of the Upas Poison and a Rusty Nail.---Effect of Pressure on the Veins, and of Repletion.---Dropsy not from Diminished Absorption.---Reason why Medicines act more powerfully after Bleeding; and why Alum in the Mouth causes a Tremor of the Body.---Great Evacuations Prevent Poisoning.---Case of Seneca.---Similarity and, in fact, Identity, of the Veins and Lymphhatics.---Arguments in favour of Absorption by the Lymphatics.---Poisons, Milk, Bile, Pus, and Blood in the Lymphatics.---Buboes not from Absorption.---True Explanation of their Occurrence.---Pressure on the Lymphatics.---Vieussens, Meckel, Blizzard, Fohman, Lobstein, Ribes, and Amussat, on Anastamosis of the Veins with Lymphatics.---Conduction by Both Sets of Vessels proved; but not Absorption by Either.---Frequent Renewal of the Body.---Different Estimates, from Seven Years to a Quarter of an Hour.---Absorption of Newly Deposited Parts.---Origin of Chyle.---Reason why Animal or Vegetable Food makes no Perceptible Difference in it.---Flow of Venous Blood and Lymph.---Nature of Erectile Tissue.---Organs which consist of it.---Its Uses.---The Thyroid Gland.---The Thymus Gland.---The Spleen.---The Supra-Renal Capsules.---Chaussier, Ruysch, Hewson, Broussais, and Beclard on these Glands.---Coats of of Veins.---Valves of Veins.---Veins with One Coat.---Coats and Valves of the Lymphatics.---Conglobate Glands.---Difference of the Aorta and Vena Cava in the Two Sexes.---The two Ventricles of the Heart, but not the two Auricles, equal in size.---Relative Size of the Conducting and Re-conducting Systems.---Reason why the Stream from a Vein is not by Jet; and why there is no Venous Pulse.---Veins neither Muscular nor Elastic.---Endosmose.---Reason why Exercise accelerates the Circulation.---Proof of Vis a Tergo in Veins.---Carson and Barry on the Sucking Power of the Heart; and on Collapse of the Lungs.

The veins and lymphatics are said to begin from the arteries, and likewise, with open mouths, from all parts of the body; but the existence of the latter

has never been demonstrated, and the assumption is gratuitous and unnecessary. The matter absorbed may be sufficiently attenuated to pass through the *coats* of these vessels, and other opinions are too gross and mechanical for a vital process. The earliest opinion was, that the veins absorbed. Hippocrates remarked, that the body was changing perpetually; new particles being deposited, and old ones removed. The ancients thought the blood, in a *fluxus* through the veins, nourished the body; and in a *refluxus*, absorbed matters from all parts, as well as the intestines. When the lacteals were thought to take up intestinal matters, they were considered to carry them to the *liver*. It was not till the seventeenth century, a hundred years after the *thoracic duct* was discovered, that the lacteals were known to terminate in it. The absorbents were at first thought to be white veins; but the opinion gradually gained ground that they were absorbing vessels. The researches of Musgrave and Lyster seemed to prove that these vessels were the sole agents in absorption. They were followed by Haller, Meckel, Hewson and Munro (Secundus). This opinion prevailed twenty years ago.

Magendie concluded that absorption was performed wholly by veins; but his experiments have been invalidated; for it has been shewn that the lymphatics and veins anastamose frequently. The following are the arguments in favour of absorption by the veins.

1. The universal distribution of veins; and the absence of lymphatics in some parts of the body, though absorption goes on in all. Lymphatics are not found below the vertebrated classes.

2. Foreign bodies are found in the veins; in cases in which the thoracic duct, and Steno's duct, have been tied; and pus is sometimes found in the veins leading from abscesses.

3. Magendie's experiment with the thigh of a dog, which proved, at any rate, that nervous blood must have *conveyed* the poison, which affected the dog as quickly as if the limb had been left in its natural position. If put forward to prove that the veins *absorbed* the poison in the first instance, the experiment is not unanswerable; for the veins and lymphatics may have communicated with each other before leaving the limb; and we cannot cut through cellular tissue, in order to insert the poison, without cutting through veins, and thus he may have actually put the poison into the vessels, instead of leaving it to be absorbed by them.

4. The prolongation of life for fifteen days after the thoracic duct had been tied, in which circumstance nourishment must have entered the system by other means.

5. Poisons destroying life, after the thoracic duct has been tied. This and the following reasons, however, are less satisfactory than the preceding. We are not sure that poisons must enter the blood, in order to destroy life. They may act wholly on the nervous system, directly or indirectly. If applied to the peritoneum, a poison acts immediately on the nerves of that part, and by sympathy on other parts, without getting into the blood. The upas poison inserted under the skin produced death. This *may* have been by absorption; but a scratch from a rusty nail may do the same, although there is no absorption.

6. It is said that absorption is diminished by pressing on the veins, or by filling them with water, so as to obstruct them. All we observe here is a swelling at the distal part of the vein; but we cannot obstruct the veins without obstructing the capillaries at the same time; and this must cause increased secretion. Hence pressure on the veins gives rise to dropsy, not by diminishing absorption, but by increasing secretion.

7. Evacuating the veins increases absorption; and thus purgatives, mercury and other medicines, act better after bleeding than when the veins are full. But this is no proof that absorption is necessary to the effect of medicines. They may act on the sensibility of the part and by sympathy on the others. A piece of alum in the mouth will frequently cause the whole body to shiver, though it could not be absorbed in sufficient time to effect it. But why does bleeding assist the action of medicines? It may have been from the capillaries having been previously so overloaded with blood as to be insensible to other stimuli. After *great* evacuations poisons do *not* act; as in the case of Seneca after bleeding long in a hot bath.

8. The supposed inadequacy of the thoracic duct, to convey the matters suddenly absorbed.

9. The best argument of all is the analogy of structure between the veins and lymphatics; for it is wrong to suppose that the arguments in favour of one set absorbing are against the probability

of the *other* set absorbing. The beginning, course, and termination of the veins and lymphatics are the same. In fact they are one system.

The following are the arguments in favour of absorption by the *lymphatics*.

1. The presence of poisons in the lymphatics; of milk in those which come from the mamma; and of bile, pus, or blood, in those which come respectively from the gall-bladder when turgid; from an abcess, or from an aneurism or an ecchymosis. The naked denial of these facts by Magendie and Dupuytren cannot overturn the testimony of noted authors. Magendie admits that pus is found in the lymphatics, but thinks it is secreted from their coats by the extension of inflammation into them. It is said that in rickets, phosphate of lime has been found in the lymphatics. The following arguments are not good.

2. A bubo sometimes takes place in glands which lie in the course of the lymphatics which lead from sores. This, however, is better explained on the doctrine of sympathetic irritation; for a bubo often arises in the course of lymphatics which lead from a sore where there is no discharge at all, and where consequently it could not be absorbed. Sometimes the buboes which take place, are not in the course of the lymphatics to the thoracic duct.

3. The diminshed absorption which takes place of any effused fluid, when the lymphatics are submitted to pressure. But if the radicles of the lymphatics arise from the capillary arteries, the fluid may be from increased secretion of the capillaries.

Those who allow that one set of these vessels (either veins or lymphatics) absorbs, cannot consistently refuse to allow the same function to the other set. The frequent anastamosis of the two sets, gives each party the means of invalidating the arguments of the other party. These anastamoses have been seen by Vieussens, Meckel, and Sir William Blizzard. Fohman saw the two vessels directly united in the mesentery; and the same fact has since been described by Lobstein, Ribes, and Amussat. Thus all the arguments are only presumptive as to *absorption* by either set of vessels; though they are decisive as to *conduction* by them both. Lieutaud and others say there is no such anastamosis; but the testimony of *twenty* who have *not* seen them, cannot invalidate the testimony of *one* who *has* seen them. We cannot prove a negative.

We know that the lacteals take up little but what is convertible into chyle. I think the body must be renewed much more frequently than is generally thought. If only a hundredth part of the blood which passes through the capillaries, be engaged in secretion, the body must be renewed once in every twenty-four hours. It used to be said it was renewed once in seven years, or in a multiple of it. Some have even said that it is renewed in a quarter of an hour.

Newly deposited parts, are more readily absorbed than others. We proceed on this principle in giving medicines to promote absorption. Scurvy acts *first* on the parts which were *last* deposited. *Venous* blood, and chyle, differ in every vessel; but *arterial* blood is the same throughout the body.

It is generally thought that the chyle found in the lacteals, is wholly derived from the matters submitted to digestion; but by far the greatest portion of their contents is received from the extremities of arteries. They must receive five hundred pounds of contents daily;—being the tenth part of the whole absorbing system, which receives five thousand pounds;—independently of all ingesta. The quantity derived from the latter amouts to only three or four ounces of really solid matter; and when this portion of their contents is so small, it is not surprising that no differenee should be found between chyle derived from *animal* and that derived from *vegetable* food.

FLOW OF VENOUS BLOOD, LYMPH, &c.

Erectile tissue is probably a part of the terminations of the veins; but is not instrumental in absorption. It may be defined as consisting of the dilatable radicles of veins. The following organs are said to consist of this tissue:—1. The iris. 2. The papillæ of the *skin*. 3. The papillæ of the *mucous membrane*. 4. The *corpus spongiosum urethræ*. 5. The *corpora cavernosa* of the *penis*. 6. The *corpora cavernosa* of the *clitoris*. 7. The papillæ of the *mamma*. 8. The *thymus* gland. 9. The *thyroid* gland. 10. The spleen. 11. The supra-renal capsules. The use of this tissue, is sometimes to act as a diverticulum of the blood; sometimes to put the nerves on the stretch; and sometimes (as in the penis) to add to the bulk of organs, and thus adapt them to their functions.

The *thyroid* gland is not found below the class of reptiles; and is questionable

even in them and in birds. It is found in all the mammalia. The lobes of this gland are not connected with each other in birds, horses, elephants, dogs, and other animals.

The *thymus* gland is not found in fishes, or in any animals below them in the scale. In the mammalia it is only found in the adults of these animals which dive, burrow, or hybernate; or in those which are liable to interrupted inspiration. The *thymus* and the *thyroid* are sometimes connected, so as to make one gland; and their office is probably similar.

The *spleen* seems in size to bear an inverse ratio to that of the liver. It is relatively smaller in other animals than in man; and in all of them it is attached to the left side of the stomach, and to the *first* stomach if there are more than one. It is larger in *adult* than in *young* animals.

The existence of the *supra-renal capsules* is doubtful in reptiles; and they are not found in birds.

The *thymus* gland is chiefly supplied by the *subclavian* artery; and the *thyroid* gland by the *carotids*. Chaussier, Ruysch, and Hewson, think that they are analogous to conglobate glands, and that they belong to the *lymphiferous* system; but by Broussais and Beclard they are considered to be erectile, and therefore to belong to the *circulating* system.

The *internal* coat of the veins differs from that of the arteries in being fibrous. The *middle* coat is thinner than that of an artery, and is of a flesh colour. The internal coat of a vein is more like that of a *mucous* membrane; while that of an artery is more like that of a *serous* membrane. The first is furnished with valves, in this respect likewise resembling the mucous membranes, which have *valvulæ conniventes*. In the heart and the sinuses of the brain only the internal coat of the nervous tissue remains.

The *lymphiferous* tissue seems to have two coats, of which the internal one is smooth, and has very numerous valves. It is less elastic than the internal coat of an artery, but more so than that of a vein; and is much more thick, in proportion to the calibre of the vessel, than that of arteries or veins.

The *conglobate glands* attend the course of the lymphatics, in the same way as the erectile tissue attends that of the veins. The structure of these glands, and of erectile tissue, is very similar; and their function is probably the same. We may describe the conglobate glands as ramifications of white erectile tissue; or as dilatable lymphatics.

The disproportion between the size of the veins and that of the arteries is not so great in females as in males. Hence we can distinguish the female from the male by the *aorta* of the former bearing a greater proportion in size to the *vena cava*, than in the latter.

The *collective* calibre of the veins diminishes as we approach the heart, probably in the same proportion as that of the arteries. The Eustachian valve, at the opening of the inferior *vena cava*, is wanting in the bear, the lion, the dog, and some other animals. It is much larger in those which dive. In the latter there is also a pouch in the *vena cava*, which is probably intended to contain the blood when the respiration is impeded.

It is generally thought that the right ventricle is larger than the left. It does hold more when injected in the human subject; but its walls are thinner, and they are not so much contracted at death as those of the left ventricle, owing to the weakness of its coats, and its being generally full of blood at the time of death. They are probably of the same size in reality. The right *auricle* is larger than the left; and this provision is necessary from the liability to pulmonary congestion.

Bichat denies that the pulmonary veins are more capacious than the arteries; but without good reason. The bronchial and pulmonary vessels do not communicate during life; though after death we may inject one through the medium of the other. The injection of one set of vessels through the medium of another set, does not prove that they anastamose during life; for by death the tissues are rendered pervious.

The chyle has its characters altered in passing through the successive glands. If the glands are sub-divisions of vessels, we must suppose that they secrete like all other divided vessels, and therefore the chyle may be altered. The same holds good with the lymphatic glands and vessels generally. The lymphatics of fishes have no valves or glands; and they reach the veins, not by trunks, but by small vessels. Those of reptiles have imperfect valves, but no glands. In birds there are some lymphatic glands in the neck. They are said to be larger in diving birds; which is another proof of their being diverticular. The collective capacity of the lymphatics is said to be

twice that of the arteries, and half that of the veins. The lymphatics are larger in childhood. In old age the glands are scarcely perceptible. Hence the relative size of the *conducting* and *reconducting* systems is probably always the same; for, if the veins get *larger* as age advances, the lymphatics get *smaller*.

The power which the heart exerts at the summit of the aorta, must be communicated undiminished to the veins. The only difference is, that the impulse in the arteries is by *jets;* but is *uniform* in the veins, the force being broken by the capillaries. As the bulk of the contents of the returning vessels is six times that of the arteries, the effect of the heart's impulse on them must be so much the less; and hence there is no venous pulse. Even if the coats of these vessels were elastic (which they are not), they would not assist the circulation; for not being suddenly dilated, they cannot be suddenly contracted. The *pulmonary* veins being of *arterial* tissue, *are* elastic; but no one attributes the power of assisting the circulation to them. The analogy with the ducts of glands has been adduced to infer the muscularity of the veins; but this has been seldom asserted, and never proved.

Endosmose has been adduced to explain the circulation; the arterial blood being rarer than venous; yet the arterial blood never enters a vein till it has become venous; and chyle is rarer than arterial blood. How is it, also, in the pulmonary circulation?

Exercise accelerates the circulation by acting on the veins, by pressure on them from the muscles in action. By these contractions the blood is made to fill the heart oftener, and of course it is the oftener emptied; and the respiration is always accelerated in proportion. It is said that the pulse is doubled from walking four miles an hour. I never found it so with me, though it sometimes rises to 120. It is said also (though I never could detect it) that if we run very hard, the first fifty beats, after stopping, will be in one-sixth of a minute.

Another power of assisting the circulation is that which is supposed by Barry—that when the chest is expanded in inspiration, the heart is dilated as well as the lungs, and will receive blood from the *vena cava* and the pulmonary veins, but not from the aorta, owing to its valves. But the circulation in the pulmonary veins is quicker in *expiration*. The valves at the pulmonary artery will prevent suction from that vessel. Barry connected with the veins tubes immersed in a blue coloured solution, which was sucked up in *inspiration*, and was retrograde or stationary during *expiration*. It was the same when the tube was connected with the pericardium or the lungs. Larrey and others have said, that, during venesection or amputations, if the patient take a violent inspiration the air will be drawn into the heart from the suction of the veins, and will cause asphyxia. Cuvier and Dumeril have given a favourable account of his deductions.

Hales cut off the ascending *vena cava*, and found that the blood was carried through it with force sufficient to raise it higher than the heart. This is a proof of a *vis à tergo*, which Barry denies. In reptiles the blood in the veins is more rapid at every beat of the heart. But Magendie has proved that you stop the circulation in particular veins, if you stop the circulation in the arteries which lead to those veins. According to Barry, the stream in venesection should cease to flow during expiration, but is more forcible at that time than at others. According to him, the right ventricle would be acting twice during expiration without any blood at all. It is not easy to see how the circulation through pliant tubes could be effected by suction. The sides would collapse. This could only be prevented by the blood being *received into* the veins with the same force as it is *sucked out;* but here we are supposing there is a *vis a tergo*. Arnott calculated that if there were a perfect vacuum in the heart, and none of the other objections applied, the blood in the *vena cava* would be moved only two inches and a half at each inspiration. It moves six times as fast as this. In fishes and reptiles there is no dilatation at all about the heart; so that this could not assist the circulation in them.

Dr. Carson's theory, in some respects, resembles Barry's. He says that the collapse of the lungs, when the chest is wounded, proves that the pressure on the outside of the chest is greater than that made of the inside by the lungs. Now the *external* surface of the heart is in the same relation to the lungs as the *internal* surface of the chest; and the *inside* of the heart is in the same relation to the lungs as the *outside* of the chest. There is therefore less pressure on the outside of the heart than on the inside; and consequently the heart must exercise

sucking power on all its vessels; but this sucking power can only take effect on the *veins*, the arteries being guarded by their valves. According to Dr. Carson, the suction of the heart depends on the tendency of the lungs to collapse, which tendency acts at all times except when counteracted by the contraction of the heart. Both Carson and Barry represent the heart as a *sucking pump*, with respect to the veins, and a *forcing-pump* as regards the arteries. But the collapse of the lungs, when the chest is opened, is probably from the contraction of the muscular bronchial tubes, acted on by the new stimulus of the admitted air. The *elasticity* of the lungs tend to expand them. Hence there is probably *no* tendency in the lungs to collapse while the chest is entire, and, besides, a mere tendency can effect nothing. We may allow the sucking power of the heart as an *auxiliary* to the circulation; but it is only through the medium of the lungs in inspiration. It is said that a vein in the near side of a ligature becomes depleted. This has lately been denied; but if true, inspiration will account for it.

IMPORTANT MEETING
OF THE
MEDICAL FACULTY OF MUNSTER.

(*From the Cork Standard.*)

A NUMEROUS and respectable meeting of the Medical Faculty of this province was held in the County Grand Jury-room at twelve o'clock, yesterday, for the purpose of petitioning parliament for a legal provision for the sick poor in Ireland, to adopt such measures as they may think proper for the protection and the interests of the medical profession.

In the absence of Dr. Baldwin, M. P. who had promised to take the chair on this occasion, but who was unavoidably obliged to leave home on urgent business, John N. Woodroffe, Esq. M. D. was called thereto, when the business of the day was commenced by

Dr. Corbett, the secretary, reading the requisition convening the meeting, and several letters from influential friends in Limerick, Kilrush, and elsewhere, apologising for their absence on various grounds.

Dr. Nugent said, it must be in the recollection of many then present, that a meeting had been held in Cork upon the New Grand Jury Bill becoming law, which for numbers, talent, and influence, had never been surpassed. (Hear, hear.) It was called in consequence of the bill, which if brought into practical operation, must, of necessity, have the effect of destroying many of the dispensaries, a class of the most valuable medical institutions for the relief of the sick poor of this country, it was deemed advisable to open a communication with government with the view of having the objectionable clause in the act repealed. Surgeon Phelan, of Clomnel, Dr. Purcell, of Carrick-on-Suit, and himself, had an interview with the Law Officers of the Crown upon the subject. Those Law Officers declared it as their decided opinion, that the act was impolitic,, and expressed their willingness, if called upon by the government, to give their opinion of the necessity there was to have the objectionable clause repealed. They had an interview with Mr. O'Connell, and he appeared to take, not only a comprehensive view of the question, but a statesman-like one also.—He spoke of the charities, at the very foundation of which the bill aimed a deadly blow; and he said that they were the means of doing immense good, and that he would give every aid and assistance in his power to forward the objects of the mission. (Hear, hear.) In the interview which the deputation had with the Chief Secretary, they submitted to his Lordship such evidence relative to the injustice and impolicy of this particular clause as to induce his Lordship to promise that he would early in the next session introduce a short bill to have this particular enactment repealed, but with a distinct understanding that it was only to meet the temporary difficulties of the case, and with a view to future legislation upon these charities. His Lordship further expressed his willingness to receive early practical information as the profession could so well give upon the charitable institutions of the country. This favourable termination of the mission being communicated to the Medical Committee of the City and County of Cork, they immediately decided upon calling a meeting of the members of the profession of the Province of Munster. The meeting had now taken place, and Dr. Nugent felt assured that from its character and respectability, that such sound principles upon the

subject of Medical Legislation would emanate, as to reflect upon the integrity of the profession, be beneficial to the public, and worthy of the consideration of his Majesty's Government.

Surgeon Phelan, of Clonmel, in proposing the first resolution said, it was scarcely necessary for him to go into any detail to satisfy the meeting that the resolution he then held in his hand was grounded on facts. Were he disposed to do so, such facts had been supplied since he arrived at Cork as that he need not go beyond them. He had seen in one of the Cork newspapers a report of a meeting of the rate-payers at which the melancholy truth was told, that a large number of the diseased of the city had to be turned away from the doors of the infirmaries and hospitals—showing thereby that a want of funds was the cause. This fact was confirmatory of the opinion entertained by them all, that instead of curtailing their resources they ought to be made more available. A professional gentleman was then in the room who was refused a presentment for the dispensary, and that without his being asked a question as to its efficiency, although no less a number than 1782 were recommended to it during the past year, independent of the assistance rendered by him outside doors which was very considerable. When such a system as that was in existence, when the sick poor were deprived of the services of medical men, it was but natural and fair that the government and the medical profession should state their opinions openly and undisguisedly. (Hear, hear.) As he was upon the subject he would urge it a little further. The sick poor of Ireland had three resources of relief to which they might resort. Those were,—infirmaries, fever hospitals, and dispensaries. With regard to infirmaries, he had taken the trouble to ascertain their adequacy, for although he had heard that they were of themselves quite sufficient to afford relief, still he well knew that they were quite inadequate to afford it to all. He had read the evidence respecting them as given before a Committee of the House of Commons, by Dr. Doyle, George Ensor, and others of apparently high authorities, who stated that they were quite sufficient. The evidence then given had made an impression on the minds of several; and it was thought that after a slight modification they would be made perfectly available for every requisite purpose. He had gone, in consequence, very minutely into them, and the result was, that he found district infirmaries to be of value to a certain extent. Where contiguity existed, these infirmaries were enabled to afford relief to certain districts, but where it did not, infirmaries were ineffective. The same might be said with regard to fever hospitals. Epidemics often raged in this country, and so did fever also, and yet there were no fewer than twelve counties in Ireland in which no fever hospital was as yet erected. (Hear.) In others there was but one, and that one, was erected in many cases at the extreme end of the county, and was obliged to afford relief to a great and extensive district of country. Therefore it was, he laid down the principle, that fever hospitals were not sufficient for the sick poor of Ireland. Dispensaries were excellent means of affording the requisite relief, but so much depended on the whims and wishes of the rate-payers—upon the caprices of the governors, and also upon the difficulty that existed in procuring subscriptions, that they might be put down as very deficient. In some counties there was one dispensary for 40,000 inhabitants. Was that sufficient? Surely not. Dr, Blennerhasset had to travel a distance of forty miles to the dispensary he attended, so great was the extent of country for which it was expected to afford the necessary medical assistance. (Hear, hear.) It was quite ridiculous to suppose that a man could attend professionally so large a district, and yet it was expected by some that he ought. He took the liberty of stating these particulars for the purpose of shewing the gentlemen present, and through them the public, that the medical charities, as at present constituted, were quite insufficient to afford the necessary relief to the sick and distressed poor in Ireland. (Cheers.) He also observed, that the committee of which the present Chancellor of the Exchequer was chairman, reported in 1830 that the institutions for the relief of the sick poor in Ireland, were insufficient for that purpose; and that the same was still more particularly remarked by the Irish Poor Enquiry Commissioners, and by the medical inspectors appointed by them.

Dr. Furlong having been for many years attached to dispensaries, was then more convinced than ever he had been of their inadequacy to afford the required relief. The difficulty was in getting subscriptions and in working against the caprices of Government. So long as the voluntary principle of support was held, so long, in his opinion, would the negligence on the part of the landed gentry, be manifested in aiding and assisting such invaluable institutions. (Hear.)

Dr. Donegan proposed the second resolution. This resolution, said he, refers to the imperfect system at present prevailing for affording the sick poor of this country medical relief in their necessities. It also refers to the main object for which this meeting has been convened—that is to say, to petition Parliament on the subject. Their motives had been misrepresented, and it had been said, that in seeking for a proper measure of poor laws they were actuated by interested objects. He could speak for himself, and he believed all present, when he said, that a general poor law enactment would meet with his fullest support. (hear, hear) From the nature of our profession we cannot devote much of our attention to political matters; but apart from every selfish consideration we have convened ourselves together on this occasion to procure a provision for the sick poor of our country; every one knows that they require some provision (hear,) for the existing institutions formed by their relief are totally inadequate. If such be the case now, how much greater must be their inadequacy when fever rages amongst us? Look at the ravages made by Typhus Fever! It constantly visits us. As surely as we have scarcity, so sure does Typhus Fever make its appearance. (Hear, hear, and cheers.) You all remember the Cholera, and you know how badly prepared we were to meet it. At that time the government gave us liberal grants and the public munificent subscriptions and yet all proved insufficient to meet the distress and wants of the diseased poor (hear.) That we require proper accommodation and increased support, for the sick poor, is beyond all doubt; indeed I know not how it could be disputed, after the astonishing fact related by Surgeon Phelan, that in one district comprising 40,000, there is but one Dispensary, and that under the superintendance of one medical man. Still, strange as it may appear Dr. Corrie one of the Poor Law Commissioners, recommended in his report to government the propriety of having only one of those Dispensaries to 50,000 inhabitants—that is, to have 162 of them in all Ireland, by which one would be given to every 50,000 of the people in the country—(hear, hear.) Such a man as Dr. Corrie must have known the labour a Physician must go through under present disadvantages and yet he was a maximum of the labour and a minimum of the remuneration (hear, hear, hear.) While he examined various men of strict integrity and influential worth, who all recommend an increase of supplies and a greater number of Dispensaries, still strange to say he was reducing their present number of 420 to 162. Conceive the situation of the Physician, who should, according to his recommendation, attend 50,000 persons, extending over a distance of 144 square miles, and then say, was it in the power of man to undergo such a continuous course of fatigue? (hear.) If he were endowed with the ubiquity of Sir Boyle Roche's bird, it would require that the medical man in charge of the proposed number, would meet quarter the duty imposed on him.

Dr. Barry, of Rathcormac, seconded this resolution.

Dr. D. Bullen had to propose a resolution embodying two propositions. First with regard to the manner in which an organized system of medical relief for the sick poor of Ireland should be maintained and supported, and secondly with regard to the manner in which the funds applied to that purpose should be levied upon the country. It was obvious to every person that the time had now arrived when Legislation for the Poor of Ireland could not any longer be postponed. The Government were pressed on by an intelligent and influencial party in Ireland, and by a strong expression of public opinion in England, to propose some form of Poor Laws for this country. It then becomes a subject of vital interest to all classes in Ireland to take care at this time, that the crude and ill-digested opinions and erroneous principles of Legislation should not embarrass and perplex the working out of what he considered to be the most intricate and dangerous problem ever solved in the history of this country. (Hear, hear.) In con-

paring the social, moral, and political circumstances of Ireland with those of England, it is impossible to deduce analogies to guide us in the introduction into this country of any system or set of institutions similar in their nature to what is adapted to the vast wealth and national grandeur of that most highly favoured island. It calls therefore for the most cautious deliberation, lest in attempting legislative experiment, the success of which may be doubtful, the poor of Ireland should be deprived of the advantages and benefits which they now obtain from the existing charitable establishments, inadequate as they confessedly are to answer the great demands upon them. The present public relief for the Poor in Ireland is confined to Houses of Industry and the establishments for assising the sick. The Houses of Industry, however, are very few in number, and cannot be viewed as a means capable of exercising any influence so extensive as to entitle them to be considered institutions effecting any great national good. Still, wherever they are established they are highly useful. Besides Houses of Industry, Ireland possesses a class of charitable institutions, extremely well adapted to the particular circumstances of the poorer classes, and which, if more extended and subjected to some modifications, would be found of infinite value to the poor. He meant the present charities for assisting the sick. All the charitable institutions at present are supported by funds arising in the first instance from voluntary contributions, and in the second from public funds, proportionate to the amount of private subscriptions. Now the first effect of introducing any law, no matter what, for the relief of the poor, which would impose a compulsory tax for that purpose on the country would be, that voluntary subscriptions would diminish to a great degree, if not disappear altogether, and that therefore the present charitable establishments, if not specially provided for, must inevitably cease to exist. (Hear, hear, hear.) He was confident the meeting would affirm that part of the resolution which declared that it is essential, in creating a system of relief for the sick poor, that the institutions for that purpose should be maintained by funds arising out of assessments wholly, not partially compulsory. It was the more necessary for the profession to give force to the expression of their practical experience in the conducting of these institutions, in consequence of the extraordinary and unprecedented termination of the Poor Law Commission which were appointed to inquire into the condition of the poorer classes in Ireland. This commission had appointed a host of assistant commissioners, selected from all professions and callings — doctors, lawyers, country gentlemen, and officers of all descriptions. The result of the labours of the assistant commissioners has been to lay before Parliament a mass of evidence comprising in itself a library, and exhibiting a spectacle of poverty, wretchedness, and human misery, and destitution, such as never has been recorded in the pages of history. (Hear, hear.) This evidence speaks for itself, and should be considered wholly independent of any proceedings or reports of the Poor Law Commissioners upon it. The Poor Law Commissioners published three reports. In the third report were presented what they advised as remedial measures for Irish pauperism. The suggestions contained in this report did not go very far, still they were what every reasonable man would wish to see carried into operation, because they laid a sound foundation for ulterior operations, without plunging the country all at once into ferment of very sweeping and extensive measures. To this report were affixed all the names of the Poor Law Commissioners. But what must the country think of this commission when an appendix was published along with their unanimous report, containing the reasons of the majority of the commissioners for dissenting from their own report, and recommending, instead of the useful, practical, and wise suggestions which they had embodied, a speculative and visionary scheme to establish a system of Poor Laws to be maintained by voluntary funds, to be managed by voluntary associations, and to be directed by a central board, who should be well paid for advising any persons who should apply to them, how they should spend their own money. (Hear, hear.) The experience of every medical man engaged in discharging any public duty is conclusive upon the necessity of raising funds for the support of the charitable institutions by a general assessment. But in seeking to place the charities for assisting the sick under a cempulsory provision, it is not in any way our intention to propose that such a proceeding should be adopted as a substitute for measures of a more general nature

which would give work to the unemployed and bread to the hungry. On the contrary, the machinery which we would urge as the best suited for creating and working a well originated system of medical relief, is that which is best capable of being carried out so as to embrace every department of our Poor Law Legislation. One of the greatest and most cruel evils of the English Poor Laws is the disgraceful manner in which the sick poor are treated. Large districts of paupers are put up to auction, and consigned to the care of the lowest bidder without the slightest attention being paid to the capability or professional character of the persons employed by the parish authorities. The result is, that the newspapers and journals are daily crowded with the most painful and revolting details of cruelties inflicted upon the paupers of England, by the ignorance and incompetency of the persons called upon to afford them medical assistance. It seems as if it were an admitted principle that when a pauper falls sick, the sooner he is out of the world the better for himself, and the better still for his parish. (Hear, hear.) Wretched as is the condition of the Irish peasant, he at all events meets sympathy when bowed down by sickness, and to substitute the heartless competiton of English parochial relief for even the present inadequate assistance of the dispensaries, would be to inflict on him a curse instead of a benefit. The second part of the resolution which I have the honour to propose, embraces a subject of deep general interest; I mean the manner in which any tax for the relief of the poor should be levied on the country. Before any object of poor law can be entertained, the present mode of assessing the fiscal burthens on this country must undergo a complete modification. At present the whole charge falls upon the occupier, the hard-working industrious producer, while the absentee, the capitalist, and the great consumers of wealth bear but a very small proportion of the oppressive local taxation. (Hear.) If, even for the indispensable purpose of creating a poor fund, a tax, however moderate, is imposed, unless that tax fall upon the occupier, only in proportion to the beneficial interest he has in his holding, and that it bears in a just and equitable ratio upon every beneficial interest in the general property of the country, reaching both the fee simple and the mortgage, such a tax, instead of diminishing pauperism, would be a most pregnant source of greater evils than this country yet endured. Let us look upon the manner in which the industrious shopkeepers in this city are borne down by the oppressive inequality of our local fiscal burthens. They are taxed according to a capricious valuation of their houses, in many instances applotted at a higher sum than their rents, whilst the dwellings of the greater part of our wealthier citizens, who now reside within the liberties, do not come under the rates at all, the applotment being only an acreable one upon the value of the surrounding demesnes. The same inequality of burthen is to be observed throughout the country, the taxes falling heaviest upon the industrious classes, whilst the wealthy escape. Such a system at this moment would be productive of the most ruinous calamities, if upon it were founded even the most modified poor law. It is, therefore, of vital importance to urge the necessity of changing the present system of taxation in Ireland, and to press upon the Legislature that, in whatever measures may be introduced for ameliorating the condition of the poor in this country, the assessment for that purpose should not fall solely upon the occupier, but should be assessed in equitable proportions upon the several beneficial interests in the general property of the country. (Hear, hear.)

Dr. M'Sweeney, briefly seconded the proposition made by Dr. Bullen.

Dr. Phelan was reminded by what had dropped from Dr. M'Sweeney, of the fact, that the central Poor Law Commissioners' Board in London was composed of three gentlemen, neither of whom is a medical man, viz—Mr. Frankland Lewis, and two other: and hence the unfortunate disputes that had sprung up in England. There should be medical men on all Boards appointed to investigate the state of the poor, for whatever system of poor law should be applied to Ireland, or whenever applied ---and he trusted the day was not remote---the basis of it must be the relief afforded for Medical purposes. (Hear.)

Dr. Coppinger proposed the next, and Dr. Nugent, of Lismore seconded it.

The several other resolutions were then proposed and seconded by different medical gentlemen, and the petition founded thereon to both Houses of Par-

liament was read by the Secretary and unanimously approved of. At the conclusion of the meeting.

Mr. Barry, not a Medical Gentleman, but a firm upholder of the dignity and respectability of the profession introduced a pamphlet written by Mr. John Revins, Secretary to the Poor Law Commissioners, in which, he said, some of the basest and grossest falsehoods appeared regarding the profession, in Ireland, that were ever penned.

The pamphlet was submitted to the medical committee for perusal, the work being scarce and it not being seen before, and it was resolved that a reply to it should speedily be published.

Dr. Woodroffe having then left the Chair and Dr. Purcell, having been called thereto, thanks were voted to the former, and the meeting separated.

RESOLUTIONS.

At a numerous and highly respectable meeting of the Medical Faculty of the Province of Munster, held in the County Grand Jury Room, at one o'clock, on Tuesday,

John W. Woodroffe, Esq., in the chair.

The following resolutions were unanimously adopted:—

Proposed by Surgeon Phelan, of Clonmel; seconded by Dr. Furlong, of Macroom:

Resolved, That the existing charitable institutions for the relief of the sick poor of Ireland, are inadequate to the great demands upon them; that the manner in which they are supported, by making public assessment depend upon the amount of voluntary contributions, is erroneous in principle, and productive of great disadvantage, both to the charities and the public at large.

Proposed by Dr. Donovan, of Glanmore; seconded by Dr. Barry, of Rathormac:

Resolved, That from our experience of the local epidemics which, for the last thirty years, have with fearful regularity afflicted this country, the want of an organized system of medical relief, capable of being immediately extended, and rendered available to the emergency of the occasion, has been productive of the most serious evils to the community, and that the imperfect efforts to meet such urgent demands have involved much fruitless expenditure of the public money.

Proposed by Dr. D. Bullen; seconded by Dr. D. M'Swiney:

Resolved, That in creating an organized system of medical relief for the sick poor of Ireland, the institutions for such purpose be maintained by funds arising out of an assessment wholly, and not partially, compulsory; and that such assessment be not levied entirely upon the occupying tenant, but in equitable proportions, upon the several beneficial interests in the property of the country.

Proposed by Dr. Coppinger; seconded by Dr. Nugent, Lismore:

Resolved, That, in order to preserve that unity of action and regularity of detail, without which these institutions cannot be rendered really effective, or valuable to the public, a central control and direction is essential, to be exercised by a board, the members of which should be nominated by government, and a certain number of which ought to be of the medical profession.

Proposed by Dr. Purcell, of Carrick-on-Suir; seconded by Dr. Haines:

Resolved, That the several medical situations in all the public charitable institutions for the relief of the sick poor of Ireland should be open to members of all the chartered universities and recognized colleges of the British empire, under such a grade of medical qualification as the legislature shall decide.

Proposed by Dr. Cahill; seconded by Dr. Hewitt:

Resolved, That a petition be presented to Parliament, embodying the principle of the above resolutions.

Proposed by Dr. Fitzgibbon, of Tipperary; seconded by Dr. Harris:

Resolved, That, as it is absolutely necessary to create a fund, to defray the past and to meet the future expenses attendant upon the prosecution of the objects of this meeting, that a subscription of not less than one pound from each member of the profession be entered into, and that the medical treasurers and secretaries of the several counties in the province collect the same, and remit the amount as soon as possible to Dr. D. Bullen, the treasurer in Cork.

Proposed by Dr. Graham, of the county of Limerick; seconded by Dr. Callanan:

Resolved, That to preserve that unity of action so essential to the furtherance

of the objects of this meeting, the medical committee of the city and county of Cork resume its functions, and that there be added to their present number the medical chairman, treasurers, and secretaries of the several counties of the province, and a physician and surgeon from the North and South Infirmaries of this city, and that so constituted, it be considered the medical committee of the province of Munster.

Proposed by Dr. O'Neile, of Fermoy; seconded by Dr. Leader:

Resolved, That to have the views of this general meeting of the medical profession of the province of Munster, carried into effect, it is absolutely necessary to have agents in London during the Session of Parliament, who will assist in and watch the progress of any legislative enactments relating to the charities of Ireland, and be the recognized medium of communication from the profession, and that Surgeon Phelan, of Clonmel, and Dr. Nugent, of Cork, be requested to act as deputies for that purpose.

Proposed by Dr. William Beamish; seconded by Dr. O'Connor:

Resolved, That our deputies be instructed to submit to government, the readiness of the medical profession to furnish every practical information in their power, to the government, whilst legislating for the poor of Ireland.

Proposed by Dr. Lamert; seconded by Dr. Furlong:

Resolved, That Dr. Corbett, of Inishannon, be requested to act as provincial secretary, and that Dr. D. B. Bullen, of Cork, be requested to act as treasurer.

Proposed by Dr. Corbett; seconded by Dr. William Murphy:

Resolved, That the transactions of this meeting be published in the Cork newspapers, for the information of our brethren of the profession in the other provinces of Ireland, and for the public at large, and that the members of the faculty in their respective counties be earnestly requested to co-operate in furthering the objects of this meeting, both by their sanction of its proceedings, and contributing to the funds necessary to carry them into effect.

Proposed by Dr. Evans; seconded by Dr. Callanan:

Resolved, That the warmest thanks of this meeting are justly due, and are hereby given to the Right Hon. Lord Viscount Morpeth, chief secretary for Ireland, for the courteous reception given to the deputation from the profession of the counties of Cork and Tipperary, and also for his lordship's kindness in expressing his desire to receive information from the profession on the subject of the medical institutions of this country, and that this resolution be communicated by the chairman to his lordship.

Proposed by Surgeon Phelan; seconded by Dr. Donovan:

Resolved, That the marked thanks of this meeting are most justly due, and hereby recorded, to the highly respectable public press of this city, for their liberal conduct on all occasions, in advocating the interests of the sick poor, and of the medical profession, and that they be requested to continue a similar advocacy until the legislature pass the necessary enactments for the establishment and support of an efficient system of relief of the sick poor of Ireland.

Proposed by Dr. Nugent; seconded by Dr. Purcell:

Resolved, That the warmest thanks of this meeting are due, and hereby given to the Hon. Robert Ning, high-sheriff of the county, for his kindness in granting the use of the Court-house this day.

JOHN N. WOODROFFE, Chairman.
RICHARD CORBETT, Secretary.

Dr. Woodroffe having then vacated the chair, and Dr. Purcell having been called thereto, it was proposed and carried by acclamation,

"That the thanks of the meeting be given to Dr. Woodroffe, for the way in which he filled the chair upon this occasion."

——— PURCELL, Chairman.
RICHARD CORBETT, Secretary.

BRITISH MEDICAL ASSOCIATION.

It is impossible to peruse the Address of the Chairman of the British Medical Association without feeling the deepest interest in the welfare and success of an ASSOCIATION which contemplates a means of alleviating, if not remedying, the fearful evils which overcome the present state of our Medical Government.

The address is drawn up with great skill,—it points out, in the clearest possible manner, most frightful grievances, both of the members of the Medical Profession and of the community, and in a manly, uncompromising tone, it gives a statement, which cannot be denied, of the vicious, fraudulent, and contemptible condition of the three bodies which now compose the Medical Faculty of the English nation.

We cannot bestow too high praise on the exemplary manner, good temper, and judicious mode in which the whole proceedings of the meeting were conducted by the Chairman, for there cannot be a doubt of the influence which even the first meeting must derive from the good conduct and respectability of the individual placed in so prominent a position.

For like reasons we may venture to form an opinion of the *kind* of opposition which the Association may expect to meet with, from the *sample* of the individuals who came forward as its opponents. In the debate which took place after the reading of the Address nothing could be more feeble, and indeed in worse taste, than some observations which were made by the only two members of the College of Physicians who spoke on the occasion; and if no more proofs were wanting, what was said by these two individuals ought to be quite sufficient to convince the members of the Association that they must expect little assistance from those *pures* who have at one time acted as general practitioners. No man knows better than Doctor James Johnson that those officers in the navy who have, from their meritorious services, been taken "from before the mast," are the greatest *tyrants*, and the most unkind friend to the sailor! So it is with those pure physicians who, at one period of their professional career, have acted as general practitioners. Intoxicated with the name of Doctor they try to support their new dignity by endeavouring to degrade the cast from which they came!

The various points alluded to in the address will afford ample room for future discussion, and they cannot be brought too often before the eyes of the public. If we dare venture to give an opinion of what will be the ultimate result of this Association, we hesitate not to affirm our belief that its laudible exertions will be crowned with ultimate success, and that too at no very remote period. It is only necessary that the members adhere rigidly to those principles, and keep in view only those objects for which the Association has been established—and above all that they should be careful *not* to admit into their council men whose characters, both in public estimation and in private life, are not likely to promote, but may materially impede the progress of the Association. They may rest assured that they have the fervent curses of all *pures*, and though some may come forward to cajole or even *offer* themselves as members of the council, the Association must regard them as "wolves in lambs clothing."

THE NEW PHARMACOPŒIA.

At last, the COLLEGE of INCAPABLES of Pall-Mall East, have been delivered, after a long and protracted *labour*, or their bantling, and if we were slavish followers of custom, it would be our duty to congratulate the Old Ladies on their safe delivery. But, alas! after the long and painful suspense which we have endured; after the fond anticipations we had formed that the result would be a production, worthy to sustain the high scientific character of the British Medical profession, and fit to take its place foremost in the rank of European Pharmacopœias; when, at

last, we find all our hopes blasted, and that the New Pharmacopœia, instead of being a production, at once creditable to the Medical profession, and equal to the age in which we live; is, in our own words, "*Manca quoddammodo et obsoleta,*" full of errors and inaccuracy: taking all these circumstances into consideration, would it not be more charitable, to offer them condolence, for having expended so much trouble and anxiety on such a contemptible production? Well, well, after all, perhaps it was folly in us to expect a healthy vigorous offspring from the antiquated dames.

To attempt a full analysis of this miserable abortion, would be a heartless task, we will therefore content ourselves with pointing out a few of the errors with which it is replete.—Look at the changes which they have made in the fluid measures; changes at once useless, and inconvenient. Did not the old measures answer all Medical purposes? Why then alter them? Or, if they deemed it necessary to make some alteration, why did they not abandon the arbitrary division of the gallon into the pint, ounce, drachm, and minim, for the more simple, accurate, and convenient method adopted by chemists of division into aliquot parts? Only look at the inconvenience which will result from the adoption of the fluid measures inserted in the New Pharmacopœia, all the measures at present employed in dispensing are inaccurate, consequently must be thrown aside as useless, and new ones graduated according to the New Pharmacopœia must be substituted. Moreover, great confusion exists in stating the composition of many of the preparations; some being stated to contain so much in the fluid drachm, or ounce, while others are described as containing so much per cent: now here it is evident great inconvenience must result; how, for instance, is the Medical man to ascertain the quantity of *pure* hydrocyanic acid in a fluid drachm of medicinal acid; the Pharmacopœia will only inform him of the amount per cent; how then is he to ascertain this point? Only by a troublesome mental calculation, which might have been easily avoided, had there been any thing like unity of design.

Turn now to their Materia Medica, and there will you find further cause of complaint; true, some few of the obsolete drugs have been removed; yet many still remain. For instance, retain Absinthium, Acetosella, Allium, Amylum, Avena, (is this retained as a memento of their having sown their wild oats) Cardamine, Centaurium, Malva Silvestris, Marrubium Merryanthes, Porrum, Rhœas, Rosmarinus, Rumex, Scoparius, Taraxacum, Tussilago, and others? Now, among the new drugs admitted into the present list, we find Bromine, Creosote, and Iodine; why were not formulas given for the manufacture of the substances, more especially Creosote? Oh, they may say, What is the use of giving formulas which few will find either convenient or economical to follow? This objection applies to many of the processes which they have given; what folly would it be for instance, for the apothecary to make his own Nitric and Muriatic Acids, Ver Chloride of Mercury, Calomel, &c. But then, if they have given formulas for the manufacture of Nitric and Muriatic Acids; why not have also given formulas for the making of Bromine, Iodine, Creosote, Sulphuric Acid, &c. Here is an evident want of unity in design. Then again, they have inserted some things in the Materia Medica without having any preparations of them in the body of the work. What is the use of inserting Lobelia Inflata in the Materia Medica, if they gave no preparation of it? If we glance our eye through the various preparations, matter for criticism presents itself in such abundance, that the only difficulty is to select. What Medical practitioner in his senses would employ the first of the two processes recommended by the College for the production of Hydrocyanic Acid; two of the ingredients are Sulphuric Acid, and Ferro-Cyanide of Potassium; now they have given no process for the production of *pure* Ferro-Cyanide of Potassium, further they have given no satisfactory means of ascertaining the perfect purity of the salt, we are thus compelled to employ the salt as it comes from the manufacturer, without being provided with means of ascertaining the purity of the salt you are about to employ: now we know that the salt as ordinarily met with in commerce, is sufficiently pure for all ordinary purposes; but it is very questionable whether the Chemist, who is constantly in the habit of employing ingredients of perfect purity in his various operations, would

like to depend on such salt in the production of an acid of determinate strength.

But the College, seemingly aware of the liability of the acid to vary in strength from the impurity of the salt, endeavours to provide against this difficulty by "adding six more fluid ounces *or as much as may be sufficient*, about 127 grains of Nitrate of Silver dissolved in distilled water, may be accurately saturated by 100 grains of this acid." Pray did the Censors of the College, ever by any change discover one of the "Pestle-and-Mortar-Men" with weights and scales sufficiently delicate to weigh fractional parts of a grain? If not, what an absurdity it must be on their part, to direct you to depend on such a process, for ensuring the uniformity of your acid.

The second or temporary process is not particularly objectionable, if you happen to have Cyanide of Silver at hand; at the same time it appears to possess no particular advantage over the process proposed by Mr. Laming. But the most ludicrous circumstance connected with this process is the formula they give for the formation of Cyanide of Silver, a salt which is only made use of in the formation of Hydrocyanic Acid. And what think you is the formula that they give? here it is, *Dissolve* ʒij. *&* ʒij. *of Nitrate of Silver in a pint of water, then mix it with a pint of Dilute Hydrocyanic Acid; wash what is precipitated with distilled water and dry it.* There now: verily the Apothecaries of England would be as inferior in intellect as they are deemed *inferior in rank* by the College, were they to adopt such an obsurd formula. Is it possible, that any one of sound mind could seriously propose a process which directs you to make a pint of pure Hydrocyanic Acid of the medicinal strength, to be precipitated by Nitrate of Silver, the Cyanide of Silver thus formed to be again employed in the formation of Hydrocyanic, equal in quantity and strength to the Acid from which it was originally obtained.

To go on with their chemical blunders would be endless; let us therefore be done with them. But there are other points which present a fair mark for the critic. Among other things, it appears to us that the College made a curious selection of mixtures; for although they enlarged the list, yet it appears to us that they have committed a serious error, in omitting a formula for the Mistura Balsami Capaibæ. Surely it is a mixture of as much, if not greater, importance than "egg flip," a formula of which they have given under the name of Mistura Spiritus Vini Gallici: not that we quarrel with this latter formula, on the contrary, it appears to be a very good formula; and we have no doubt that the admirers of "egg flip" will adopt it as their formula. Then, again, how does it happen that they have omitted the Liquor Opii sedatives of Battley, after the process for making it had been communicated to them? Is it because they conceived it to be a preparation of little value. If so, why have they not been more particular in excluding other preparations of a much more questionable reputation? Or is it, that Mr. Battley, by some *peculiar* influence, procured the suppression of that formula, in order that he might continue to receive 2*d.* per drachm for his sedative solution.

Such is the character of the New Pharmacopæia of the Royal College of Surgeons. Had it been the production of a private individual, it would have been wholly unworthy our serious consideration: but emanating, as it does, from a body of men, who arrogate to themselves the almost exclusive possession of high literary and scientific attainments, it becomes a matter of necessity to deal with it thus, in order to rescue the profession, in the face of Europe, from the imputation, that the scientific acquirements of British medical men in general are to be measured by the miserable share of scientific knowledge displayed in that contemptible affair, the London Pharmacopœia. Well might its spirit mournfully exclaim—so mishapen and deformed am I, the very dogs bark at me, as I halt by.

WESTMINSTER MEDICAL SOCIETY.

January 23, 1837.

R. Quain, Esq. in the Chair.

But two members were present at the early part of the evening, which the chairman remarked upon and attributed to the prevailing epidemic.

Mr. Hale Thomson drew the attention of the society to a case of Strangu-

lated Femoral Hernia in a female aged 56, who was admitted into the Westminster Hospital on Tuesday last. The house surgeon having failed in reducing the tumour by the usual means, sent for Mr. Hale Thompson, who saw the patient on the Wednesday following, and failing in the reduction, a consultation was held, at which it was determined that the patient should be operated upon. This determination was come to in consequence of the patient having had no evacuation from her bowels since the Saturday previous, notwithstanding that she had no pain upon handling the Hernia, or any other urgent symptom. After it was announced to her that an operation was to be performed she had two copious evacuations per anum. Mr. Hale Thompson operated on the Thursday evening and the patient expired ten hours after. Upon examination after death, a slight degree of inflammation was observed around the constructed parts, but in his opinion not sufficient to cause death. Mr. Hale Thompson imagined this to be a case in which the patient died from the shock of the operation.

The Chairman said that it was not unfrequent that the exposure of the inner surfaces of the peritoneum in aged individuals terminated fatally.

Mr. Thurnam said, that he was present at the *post mortem* examination, and that no doubt existed in his mind of the instance of extensive peritonitis; his opinion he supported in consequence of the vascularity of the peritoneum and the effusion of lymph on that membrane, the house surgeon having stated to him that he had been called up during the night, and had to apply leeches and other remedies for the relief of the symptoms. There was also detected at the *post mortem* examination a rupture of the coats of the intestine, but Mr. Thurnam was inclined to think this occurred after the operation, and was not made with the knife.

Mr. Hale Thompson thanked Mr. Thurnam for his description of the *post mortem* appearances, as he had not an opportunity of being present, and only saw the parts in a detached state.

Dr. James Johnson thought that the operation was justifiable notwithstanding the absence of pain; and that in general he thought the cause of failure in operations for herniæ arose in consequence of their not being performed sufficiently early.

The Chairman remarked that it had been advocated by some surgeons, amongst whom was Mr. Skey, that the unpleasent consequences of opening serous cavities might be avoided by dividing the parts to the sac, without opening it, and then reducing its contents, which method Mr. Quain contended was but another way of applying the taxis.

Mr. Bennett Lucas said that the consequences of opening serous cavities were familiar to every practical surgeon. He mentioned two cases which made a strong impression upon his mind from the occurrence of this being received into hospital upon the same day. In one, a trifling wound of the peritoneum by a pen-knife, produced fatal results; and in the other, although the peritoneum was laid open to the extent of ten or twelve inches, the individual recovered. In the latter case, much difficulty was experienced in reducing the protruded viscera, and the lips of the wound were retained by four stitches of the interrupted suture. The small wound occurred in a boy, and the large one in a man aged at least forty. The fainting, and other symptoms which accompanied the simple palliative operation for hydrocele, furnished additional instances of the effects produced by opening serous cavities. Mr. Lucas wished, in connection with this subject, to draw the attention of the Society to application of steady and hard pressure to the internal abdominal ring in cases of reducible herniæ, with a view to the exciting a sufficient degree of adhesive inflammation, and a permanent cure as a consequence. This object appeared not to be sufficiently attended to in the application of trusses. His attention was forcibly directed to it by a Mr. Carpenter, who came from America, and who devoted much attention to the subject. The testimonial this gentleman presented from Mr. Pattisson, late of the London University, and others equally eminent in their opinion of the efficacy of his treatment, induced me to place a patient under Mr. Carpenter's method of treatment, and which he has every reason to believe, has perfectedly succeeded.—A piece of hard wood, with a few folds of a common handkerchief, entering between it and the skin, served for the ordinary pad and the spring of the truss was four or five times more powerful than usual.

Dr. James Johnson replied that thi

was not a new mode of treating hernia. When he practised as a surgeon, he witnessed as many as twenty cures from the ordinary method of applying the common trusses; and, indeed, that the object in applying trusses was for the purpose of producing adhesive inflammation, and a cure thereby.

A gentleman said he agreed fully with Dr. James Johnson, and illustrated his observations by a case which occurred in his own practice, a curious fact connected with which was, that his patient was liable to repeated attacks of hernia humoralis. These he attributed to the obliteration of the result of applying the testicle by the pressure of the pad, even of the common truss, and upon the occasion.

Mr. Costello remarked that his intention to lay before the Society a pattern of a new truss for treating reducible hernia, which had the advantage of keeping up the protruded parts without producing pressure, and not possessing the usual spring, which pressed upon two situations.

Mr. Lucas begged the Society would not imagine that he was the advocate of Mr. Carpenter; he was the advocate of science, no matter from what quarter it emanated, and when so eminent a surgeon as Mr. Guthrie did not scruple to try various nostrums upon himself and others, with the view of testing the efficacy they were popularly supposed to possess, he would not scruple to do so. He felt some hesitation in differing with so experienced a gentleman as Dr. James Johnson; but he must say that the application of trusses was in general made with a view to the comfort and prevention of danger to the patient, by not allowing the viscera to descend, rather than to a cure of the disease. In this he was borne out by the testimony of an eminent non-medical character, the late Mr. Cobbett, who gave a testimonial in favour of the truss he wore as an instrument for comfort and prevention of danger, but not for *cure*.

Two members were then proposed, and the meeting broke up.

RANDOM MEDICAL RECORDS.

(From the Note Book of Vigil.)

VISIT IN PASSENT TO ST. BARTHOLOMEWS HOSPITAL.—D. M. 15, 1834.

Inflammation of the right Mamma and Axillary Glands following exposure to cold. Expectation of LAUDIBLE *pus—incision—disappointment—termination in disappointment.*

No. 262.

HESTER CRABB, at twenty-five was admitted originally into the hospital for *Iritis*, and was discharged cured. From exposure to cold, her right breast became swoollen and painful, and she was again accommodated with a bed. A few days after she was discharged the breast began to enlarge, accompanied with shooting pains extending across the axilla and down the inner side of the arm to the elbow joint. Under the use of fomentation and poultices the breast has been getting progressively larger and more painful, the integuments are of their natural colour; an obscure sense of fluctuation was thought to be given at the lower part of the tumour, and an incision was made by Mr. — which was followed by a copious discharge of the "ruddy tide of life" and nothing more.

The fomentations to be continued.

Hast Pulv. Jalap Comp, ʒss n. s.

18th.—The breast is more painful and larger; she cannot bear to have it gently pressed upon, and the glands in the axilla are exquisitely sensible, the skin covering the anterior part of the breast has attained a dusky reddish hue, the cuticle is desquamating from the warm applications; she has had bad rest, little fever, and no rigors. The integuments are supposed by Mr. — to be thinner at the outer end under part of the breast, and he suspects matter *here*. Proposing a second explorative cut to give it vent, the patient objects, and Mr. — allows NATURE to pursue her course, assisting the honored *Dame* with a continuation of the poultices and fomentations.

Reft Pulv. Jalap Comp.

24th.—The patient is well. Her breast is of the natural size and consistence. The first cut has healed, leaving the usual citatrix after such wounds. No fluctuation can be detected in the situation where it was proposed to make the second incision, and Mr. — has had the candour and good-nature to congratulate her upon her escaping the explosative cut proposed upon the 13th.

Observation.—This case is of value, and mainly instructive in one point of view, viz., that a surgeon, no matter

how extensive his opportunities of witnessing practice, is often deceived when *exploring* that matter *ought to be* present, he feels for it. John Bell has a remark somewhere, "that physiological speculators, when making directions to prove their theories, invariably *find* or *make out* the arrangement of parts they wish for." So with surgeons; how often have I seen the fingers placed upon the swelling, and by the alternate pressure a sense of fluctuation given, without taking into consideration the structure of the part examined? There is no organ in the body so liable to give this fale fluctuation as the female breast. In this case, had a second incision been made, as much matter would have followed as did at first. Mr. — prudence, however, did not urge the operation, but left the management of the case to nature, and he more than once congratulated the patient upon her getting so suddenly and so unexpectedly well.

DISPENRARY, ——— ST., 1835.

Gonorrhœa and Congenital Malformation of the Urethra.

A patient presented himself with gonorrhœa, aged 36. He was married, and the father of four children, and got the disease in an illicit intercouse. The *orifice* of the *urethera* opened *two inches and a half* behind the *glans penis*, and a shallow groove existed from this opening to the extremity of the glans. The prepuce was deficient posteriorly; there was no frœnum, but a small transverse band of skin guarded the orifice of the urethra. The glans penis was well formed, and had at its extremity a slight depression marking where the natural orifice should be.

OBSERVATION.---From this malformation follows that in sexual intercourse the seminal fluid must have been deposited at least two inches and a half from the *os tincæ*, and upon the *under surface* of the *vagina*, and the patient was the father of four children.

The *specific* distance of Hunter was not present; yet the individual had gonorrhœa. He was cured by aperients. But "monsters prove nothing."----*Magendie.*

——— HOSPITAL.

APOPLEXY. --- *Enemeta* --- *Blister*--- *Death.*

OBSERVATION.---May 20th, A. D.---A man accustomed to hard labour, aged 65, fell in a fit. He was immediately bled by a practitioner, and placed afterwards under the care of an old hospital physician. His right side was paralyzed, his left side convulsed; he made several ineffectual efforts to rise; had stertorous breathing; was sensible, but could not articulate. When asked where he felt pain, he placed his left hand upon his left temple. He was in stature short and stout; and his face presented an appearance of bloatedness and vascularity.

21st.---Has had aperients by mouth and anus, and a *blister over the entire head.* Pulse 76, and full; right pupil dilated. He is more sensible. *Paralysis* as before, but *convulsions* have ceased.

24th.—Purgatives persevered in, and *blister has been kept open.*

The colour has forsaken his face: the upper lid of the right eye, upon being raised, falls as if from its own weight; the left lid is easily raised, but upon being let go it contracts violently.

Sordes on teeth—*clammy* skin—*hiccup*—*death.*

OBSERVATION.—Of what use was the blister? It was evident one of the *cerebral* arteries of the left side had given way, and these vessels are derived from the *internal carotid;* the *membranes* of the brain and the scalp being supplied by branches from the *external* carotid; and no anastomoses takes place between these trunks or their branches of any consequence. If an effusion of blood can be well ascertained to exist (suppose from a local injury) between the skull and dura mater, we, even in this favourable case for the application of a blister, would reject such remedy, and apply the trephine. A blister can act only in one of two ways, either from its local effects or its constitutional. In the former way it could have been of no use in this case, and to produce any good by its constitutional effects it might have been applied with as much advantage to the surface of the *glutleus maximus* as to the *head.*

This patient should have been judiciously bled, and that frequently; and in addition to the enemata, small doses of calomel and antimony might have given him a chance. The post mortem examination displayed an apooplectic cell, the size of a small egg, and containing dark blood, a small portion of which was *coagulated.*

OPERATION FOR ARTIFICIAL PUPIL.

May 28th, same year as above.—I this day, at half-past 12 o'clock P.M., saw the iris completely torn from its connections in endeavouring to detach a portion of its greater circumference with a view to the formation of an artificial pupil. It occurred from the operator losing his patience. The case was a very favourable one, and the unconscious patient had lost all chance of ever seeing with the organ.

OBS.—Haste in operations, with a view to astonish the multitude, cannot be too strongly censured at all times. Here, however, the operator went wrong in the first instance, and instead of confessing it manfully, by withdrawing the needle, and deferring the operation to a more favourable time, he kept on bungling, with a view to appear immaculate, and deceive others with keener eyes than his patient.

" Nemo mortalium omnibus horis sapit "

The London Medical

AND

Surgical Journal.

Saturday February 5, 1837.

LIBERALITY OF THE GOVERNMENT IN FRAMING THE SENATE OF THE

METROPOLITAN UNIVERSITY.

BEFORE presuming to question the propriety of the Chancellor of the Exchequer, for the choice which he has made of individuals to form the senate of the Metropolitan University, there are many circumstances which ought to be maturely considered, and many difficulties which he had to overcome, which ought not to be passed over before we can form a just estimate of the judgment and discrimination which he has shown, in making his selection.

It ought to be recollected, that the Army and Navy, Medical Boards, as well as the Directors of the East India Company, had long been so dissatisfied, not only with the fraudulent mode of obtaining diplomas from the College of Surgeons, but with the disreputable means at which degrees in Physic had been obtained at all and every one of the universities; each of those bodies were compelled to institute a system of examination of their own, in order to prevent disqualified and disreputable individuals from entering into their respective services. It was therefore a wise measure in the chancellor of the exchequer to elect into the medical senate of the London University some persons who either were Navy, or who had been in the medical services of the Navy and Army; and Dr. James Clark having long served as a surgeon in the Navy and Sir S. Hammick's long services and undisputed practical talents in the Great Naval Hospital at Plymouth, must render his opinions valuable on all that regards the Medical Science of the Navy; whilst Sir James M'Gregor's position at the head of the Army Medical Board, must render his co-operation and practical knowledge useful in all that regards the education of our Army Surgeons.

Neither was it possible to have selected two individuals whose periods of life and talents were more likely to render them efficient members of the medical senate than Dr. Jonas Quain and Mr. Keirnan. Both of these individuals have distinguished themselves as Teachers of Anatomy, and now having no *favourite* schools to support, they must be considered as important additions to the new university.

Dr. Neil Arnott, besides being a man of high scientific acquirements and great moral worth, long served to the maritime service of the East India Com-

pany, so that he also must materially assist the senate in the peformance of their important funtions.

The persevering industry of Dr. John Sims in co-operating with Mr. Warburton in the laborious task of conducting the examination before the parliamentary committee, is a sufficient test of his earnestness in the great cause of medical reform, which along with his professional acquirements and zeal, renders him to the eyes of his professional brethren, particularly acceptable as a member of the senate.

Dr. Hodgkin has surely evinced sufficient skill and acquirements in his profession to satisfy the public of his being worthy of the responsible situation which has been conferred upon him; and besides, it ought to be recollected, that he was one of those licentiates who contemptuously refused accepting a *fellowship* amongst the old and superannuated nuns of Pall Mall East.

Of the election of Dr. Peter Mark Roget as a member of the medical senate, we know that there are two opinions entertained of its propriety. But whatever errors he may have committed when compiling his works, in not acknowledging the sources from which he derived his information, and however much he may have mixed himself up with the disreputable intrigues which have for some years past disgraced the Council of the Royal Society, there is something amiable and flexible in his nature which we do hope and trust will enable him to adapt himself and be moulded into that form which will render his services useful and acceptable to the New University. Let it also be recollected, that he is one of those licentiates who deserted the cause of his fraternity, and accepted the fellowship on *terms* which many others of a higher tone of mind would not stoop to receive!

Messrs. Bacot, Ridout and Pennington, being each members of the Worshipful Company of Apothecaries, have very properly been chosen from that body, and will represent the interests of the general practitioner. Mr. Bacot has long served as an able surgeon in the guards, and Mr. Pennington was well known personally to Mr. Spring Rice as an able and judicious practitioner, and one of the most successful candidates for public favour in the practice of his profession.

The reason of Mr. Crampton, of Dublin, having a place in the senate of the London University we cannot presume to state. It has been whispered that it is the intention of the surgeon-general of Ireland to come to the metropolis to practise his profession, and if this surmise be verified we will heartily rejoice in the event. His character as a practical surgeon being at least equal to that of any individual in this metropolis, and his gentlemanly deportment and conduct in private life being of a description very superior to that of most of our hospital *pures*.

The *fellows* of the College of Physicians are represented by two individuals than whom none could have been chosen from amongst that contemptible body who are so likely to co-operate with the liberal members of the medical senate of the New University. Dr. Billing has always vigorously opposed the vices and monopoly of the Pall Mall nuns; and Dr. Hewitt's kindness of disposition, gentlemanly manners, and liberal sentiments, rare commodities amongst the fellows, must render his services in the University most acceptable.

The nomination of Mr. Brande must also give universal satisfaction. High in the annals of chemical science, his name is equally respected in private life. To conclude our observations on the list of the medical senate of the New University, there only remains Dr. Locock, whose name is as yet quite unknown in the history of medical literature, though his peculiar talents are well appropriated amongst the particular junta in all whose projects he has been actively associated, so that his conduct as a member of the senate must be closely observed. It is proper, in order to watch the proceedings of the senate, not only that the public, but that the private, history of each of its members should be strictly scrutinized, so that the spring of all their actions as members of the New University should be rightly appreciated. It is to be understood that Dr. Locock, from being an accoucheur, is a fit person to conduct this portion of the examinations, though the medical public have been very much astounded that the able assistance of Sir Charles Clarke should not have been solicited upon this occasion. The appointment of Dr. Locock is, therefore, considered as one of those *jobs* which no government, however righteous, can altogether avoid.

The doctor, let it be known, was an elève of Sir Benjamin Brodie's, acted afterwards as an assistant not only in private practice of the late Dr. Gouch, but was also his aider and abettor in getting up, subscribing, and contributing to the most unprincipled of public journals. Whilst, therefore, this appointment of one of their own conclave is justly considered by the corruptionists as a *triumph*, the circumstances which have led to the election and his real pretensions of the *pseudo fellow* to the appointment, are sufficiently known to the great body of the senate, so that the public has little to fear from any efforts which he may make to check the spirit or to shake any of the fundamental principles of the new institution. Before concluding the observations we have been prompted to make, and the unprejudiced opinion we have endeavoured to give of the materials of which the university of this great metropolis has been formed, we cannot avoid noticing the wisdom of the legislature in choosing the medical senate not only from amongst all grades of practitioners, but also from individuals belonging to each of the different kingdoms of which the empire is composed, as well as individuals professing different religious creeds.

We have plenty of English *senators*, abundance of Scotch, and a fair sprinkling of Hibernians, with a specimen of an Alpine traveller.

The names of Hammick, Brande, Bacot, Ridout, and Pennington, ought to be sufficient to satisfy the craving digestive apparatus of John Bull, that his *liberties* will be carefully preserved. Whilst a M'Grigor, a Clarke, and an Arnott, will console the northern manufacturers of degrees from the infringement and loss in trade which they will inevitably suffer, and our friends of the Emerald Isle must be tranquillized when they see a Crampton, a Quain, and a Keirnan amongst the members of the London University. The introduction of a Swiss, in the person of Rogét, amongst the senate, we cannot conceive to have arisen from any object of *foreign diplomacy*.

But perhaps it was of far more importance in the legislature, in order to

reconcile the conflicting political parties composing the houses of Parliament, each struggling for supremacy, that no predilection should be shown in favour of individuals whose pliable consciences should enable them to affix their signature to the thirty-nine articles, or any other number which the *certificate* system might require; it was, therefore, an act of great wisdom in the Chancellor of the Exchequer in forming his list for the medical senate to select individuals, not for their particular form of religion, but to make his choice from amongst Protestants and Presbyterians, Catholics and Quakers, Irvinites and Unitarians, Seceders and Anabaptists, Jews and Gentiles. Whilst, therefore, a Hammick and a Brande will be firm supporters of the Established Church, and a M'Grigor and a Clarke, uphold the tenets of Presbyterians, the Catholics are ably represented by an Arnott, a Quain, and a Keirnan, and the mild "Society of Friends" will lose none of their due consideration in society by the advocacy of Friends Sims and Hodgkin.

CONTRIBUTION TO THE PATHOLOGY OF THE HEART.

BY THOMAS SANDERS, M.D.

It were desirable that some means were discovered for distinguishing the organic and functional affections of the heart. The frequent errors in diagnosis, and, consequently, in practice, which are attributable to the want of such means forcibly indicate the deficiency and demand that it be supplied.

Corvisart's maxim that symptomatic palpitations are "legeres, faibles, fugaces," is erroneous, but recent research has not furnished a surer criterion.

That they are of short duration is at best a very useless sign; for how could medical men wait for months, probably, to ascertain the disease? And it is a false one. Nature places no such limits to her phenomena, as are prescribed to her in books. The celebrated mathematician, De la Hire, after suffering for a very long time from palpitations which obstinately resisted every remedy, was completely cured by a quartan fever. But so numerous are the examples of this kind, given by authors, that it were superfluous to insist thereon.

Laennec, in his splendid work, does not show his usual precision and acumen when treating of this subject. He says, (vol. ii, p. 754,) speaking of nervous palpitations:—"La première impression que produit à l'oreille l'application du stéthoscope, sur la région du cœur montre déjà que cet organe n'a pas de grandes dimensions. Le bruit, quoique clair, ne s'entend pas fortement dans une grande étendue; et le choc, lois même qu'il parait fort au premier abord, a peu de force réelle d'impulsion, car il ne soulève pas sensiblement la tête de l'observateur. *Ce dernier signe me paraît le plus important et le plus certain de tous, en y ajoutant a fréquence des battemens, toujours plus grande que dans l'etat naturel.*" So far from this being correct, the sounds in thin individuals are often distinctly heard even in the back: nor is the choc more to be relied on. Testa, in his excellent work Delle Malattie del Cuore, presents many instances of this. Among others, he relates (lib. ii, p. 35,) the case of Antonio Nerozzi, who had been afflicted with palpitations for ten years, which were always remarkably violent at the approach of a thunderstorm, and where they were so, the heart, by its force, *seemed about to burst through the parietes of the thorax.* This man died from water in the chest. Testa examined the body, and found that *the heart was rather small, but in other respects perfectly healthy.* Morgagni (letter iii, 2,) narrates the case of a female, in whom the palpitations were so powerful, that "*the breast was perceived to be lifted up by every stroke,*" and on dissection *every thing in the thorax was sound.* These facts then show that Laennec's remarks on this disease are not certain guides, and are by no means applicable to every case; and, indeed the very contrary of what he states regarding impulse is common in one large section of functional diseases of the heart, a section which has not obtained due attention. I allude to those cases where, from rachitis, the ribs are bent inwards at the præcordial region, and disturb the heart's movements. The palpitations here usually increase in pa-

roxysms, but as the cause is constant, they also are more or less so, and thus often lead to error. That in such cases the heart is generally sound, I have ascertained by careful dissection, and by the heart's action becoming normal, when the ribs are brought to their proper position.

In functional palpitations, besides the frequency in the number of pulsations, which Laennec mentions, I have observed that the same proportion as in health is maintained in the relative force and duration of the two sounds of the heart. By paying attention to this simple fact, I have hitherto been enabled, successfully and at once, to determine the nature of the disease, whether or not the sound was heard over a great extent. Though I would not affirm, that inequality from mere disorder of function is impossible, yet, where in palpitation the sounds are proportional, it may be certainly inferred that there is no organic lesion.

Edinburgh, 15, *Duke-street*.

SKETCHES
ON THE STATE OF
MEDICAL KNOWLEDGE IN PERSIA.

Any one who has read Morier's Heyji Baba may have formed a tolerable idea of the condition of medicine and surgery in that of Persia—if the superstition, ignorance, and credulity of the native Hakkims, who, bigoted to their own stupid and erroneous fashions, claim decided superiority over the Franks, whom they affect to pity, and detest and reject with disdain any innovation upon their customs, and any improvement in their art as contrary to the law of the Koran, and consequently to be rejected by every Mahommedan who implicitly believes in the true faith. It is a remarkable fact, as showing more clearly the character of the Mahometan, that though more intercourse has of late years taken place between the Franks and them, and consequently, that they have been able to appreciate more fully the inferior position they maintain with the former as regards literature, science, and the arts, yet the same intolerance, the same aversion, and the same claim to superiority exits now-a-days among the Asiatics, fallen from their proud state of power, as existed in the time of the Khalifs; and though it may be asserted that the introduction of European customs into their civil and military cases must be taken as a proof of more tolerant feelings, yet there seems to be an impenetrable barrier to knowledge, which the Asiatics can never surmount; for no compromise can be made by a true Mahommedan between his own personal feelings and the express and direct injunction of the Koran * on the subject of Christians, and if he be, as he professes, of the true faith (Islam), a natural consequence of his belief is to look upon the Nazaranni as degraded and inferior beings, with whom it is sinful to have any thing in common, from whom nothing good can be learned, and who are the destined victims, as they are the present ministers of Khailau and his angels.

Though medicine and surgery have made rapid strides in many parts of the East, particularly in Egypt and Turkey, under the direction of clever, enlightened, and enterprising Europeans, in Persia astrological predictions, and mystic and useless incantations still take the place in a case of difficulty of a rational and systematic method; and very often the unfortunate patient is left to die, when a proper and timely administration of remedies would restore him to life. The strange doctrines of hot and cold diseases, and of male and female remedies which they advocate, taken from the Arabian works of the twelfth and thirteenth centuries, as Rhases, Abenzoar, Abo Senna, and Ibu Senna, coupled to their profound ignorance of the first rudiments of anatomy, physiology, and chemistry, renders it impossible for them to make any advancement, till an enterprising prince shall be placed over them, who, like Sultan Mahmoud of Turkey, by forcibly breaking down the strong barrier of religious hate, will thus enable them to surmount the obstacles which the exclusive nature of the law of Mahommet seems to have designedly thrown in the way of their improvement. In Persia it may be said that no change has taken place for the better for nearly seven or eight centuries; they still continue the same course; are per-

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* O true believers, enquire not concerning things which, if they be declared unto you, may give you pain, but if ye ask concerning them, when the Koran is sent down, they shall be declared unto you.

fectly satisfied with their scanty share of medical knowledge, and reject all attempts to lead them to a proper investigation of the true principles of science. A man to be seen dissecting would be taken for a ghoal, and he would be shunned as a degraded being. To be seen engaged in chemical experiments would argue a correspondence with the Devil, and he would be magnified into a magician; so that, in fact their own prejudices prevent them from making any advancement. The profession in Persia is divided into three classes: druggists, barbers, and doctors (hakkim) who join a slight knowledge of practical surgery to their other qualifications. The druggists have generally small shops in the bazaars, where they dispose of their medicines retail. The greater part of their stock consists of dried herbs and plants, for making decoctions, fomentations, and infusions; the three most lucrative branches of their business: though of late years they have introduced from Georgia small quantities of European chemicals, principally from the Moscow fabriques; such as sulphate of iron and copper, sulphate of quinine, Peruvian bark, alum, borax, bitarbrate of potass, carbonates of soda and potash, and tartaric acid. Calomel occasionally, which they call "white powder;" and occasionally, though more rarely, antimonial preparations, though these are not to be found at every druggist's. They have also euphorbium, (Persian variety, highly poisonous) elaterium, the ricinus, senna, rheum, tartaricum, gums, and other aromatic herbs which grow wild on the mountains. The dispensatory in common use, which is, like all other works, in manuscript, is that by Nour'odin Mahomet Abdalla Hakkim Ain el Melek Shiragi, in which will be found a list of useless and innocuous substances, which have evidently been compiled from the work of the Greek, Latin, and Arab authors. Of the former they have translated Hippocrates, Kitab i Pocral if Mehatm; Galin, Paracelsus, and Pliny, of the Arabs, Rhazes, Abo Senna, Ibu Senna; the canon of Abo Senna Abinsoar, &c. and others of inferior note. Their knowledge of poisons is very great: the greater part of these appears to come from the vegetable kingdom, euphorbium elaterium, &c., although they are acquainted with metallic poisons, as arsenic, and bichchloride of mercury: the latter they procure from Tiflis in Georgia. Their cunning and knowledge in poisonous combinations is celebrated all over the East, for they are generally the passive agents of their princes, who pay them well for this kind of service. Some assert that they have power to destroy life in any given determinate time: this idea has, however, probably originated in their making use of astrological predictions to mystify their proceedings; in such cases, moreover, the more important point is kept steadily in view, and the food of the unfortunate object is adulterated, from time to time, with such quantities of poison as will be sufficient to produce the desired effect, while it would seem to the sufferer to be the result of the unnatural and terrible action of certain unfavourable conjunctions of the stars, which exert fatal and gradually destructive influence over him. In other cases more evident and potent poisons are made use of, as arsenic, opium, &c. The nature of these poisonous combinations is kept a profound secret by the native druggists: those I have been able to ascertain are the following: cinnabar, arsenous acid, pounded diamond, and emery dust, to be used in pilau or yoghoort (sour curds, a favourite food of the Asiatics). This, they say, produces death, by giving rise to severe dysentery, which generally proves fatal. Leaves of a plant, used in decoction, from the coast of Ghilan, on the Caspian, though I was unable to ascertain its class—euphorbium. The following is one of their most deadly preparations:—Ext. euphorbium, mianna bug (I have sent you a case of a bite of this venemous insect), mucus from the intestines of a person recently dead from dysentery; it must be scraped with a rusty knife, equal parts, mix in a small pot in boiling water. This is asserted to be highly energetic. It kills in a variety of ways, producing either dropsy, ascites, inflammation of the bowels, or a low nervous fever, terminating in typhus. In some cases the patient seems to linger for about ten days, though in other cases the poison destroys him in about three or four. I am aware, also, and have it on good authority, that the mucus scraped from the intestines of a person recently dead of dysentery is considered by the Druses, and other tribes of the Lebanon, as a powerful and energetic poison, and it is also spoken of as such in various parts of Syria. The character of the Persian druggists is most infamous? they are void of all principle, cunning, fawning, and servile, and make

no scruple of obeying the murderous dictates of their tyrannical masters towards even their dearest friends.

The weights in use among them are, the shafgran and the half shafgran, a Persian silver coin, about the value of ten pence, and near equal in weight to our ℈ and ʒss. They also make use of barley-corns. Their larger measures are okes, and mauns, which vary according to the locality; thus there is the maun Tatruzi, and the maun Shirazi, which vary considerably. One of the commonest articles to be found in the store of a Persian druggist is the choub chiens, or China root. This is used by them in almost every case, inflammatory, asthenic, or chronic. It answers in all diseases. No affection can long withstand its affection, for it is, according to them, a specific in all diseases to which flesh is heir.

The virtues are celebrated, together with those of tea and coffee, in a native Persian publication, headed with this euphonious title, "Choub Chini," explaining the nature of the physical uses of this plant, together with chai (tea), kowwee (coffee) When administered, the patient keeps his room; the doors and windows are shut, and all external air excluded; a strong decoction is then given him; clothes are heaped upon him till he has the burthen of a camel, or till a profuse diaphoresis is produced, when he is allowed to eat. The druggist also boasts of his store of prophylacticis. Besoam and holy stones from Mecca, besides wonderful charms, which some holy Mollah or dervish has consecrated and rendered efficacious. The Padzecher, say the Persians, is the king of medicines, a royal drug---he is the protector of life. No venomous insect dare molest a fortunate being who possesses a vesoar. Scorpions avoid him with care, and look after them to see if their tails are safe. Miairna bugs fly far away; snakes sneak out of his path with horror. It is useless, says the princes and khaws, or lords, to poison such a man for his money; he possesses a charmed life. The Persians derive the etymology of the word from Pader-i-zeher, the father, or master of poison; though the Arabs and Syrians give it a Chaldee derivation---el Bezoar. They are purchased by druggists from Bokhara, India, and other places; and the sums which they give for these substances are often considerable. One I saw on the arm of a Persian lady was valued at from 20 to 30 tomams, £10 to £15, and sometimes in cases of epidemic they fetch even more. The vesical calculi are frequently made use of, but are considered an imposition by the druggists, the true tusoan of the Persians following an intestinal concretion, or else a deposition of calcareous matter at the inner canthus of the eye of the stay. The latter is considered most valuable from its rarity, though the former fetches also a considerable sum, even if it be a triple phosphate, where it is likely to be taken for vesical calculi, which cut little, and are considered spurious. I once had an opportunity of seeing it administered. The patient had been bitten by a scorpion. The druggist who possessed this in his eyes---inestimable treasure---took out the tesoan from his breast, and with heated breath applied it, dripping in new milk, to the puncture. The solemnity of the action was further hightened, and the value of the article enhanced, by the pompous manner in which he repeated his supplicatory prayer.

Bisinellah, el rahman, el rahheeam, la illah ilhulla---(in the name of God, the merciful and Omnipotent---there is no god but God! But I did not perceive, nevertheless, any great change in the condition of the patient after the application of what is considered by the Persians the sum and substance of their medicreed. Occasionally also, though vainly, may be seen small quantities of sarsaparilla, called by the Persians sarsa, and cascarilla. They occasionally also send to Tiflis for small quantities of lunar caustic, called by the Persians and Arabs Hagr el gehenna, stone from hell, on account of the pain it produces during its application. Within these last few years they have received at Tartreez. Ispaham, and Bagdad, from English and other travellers, small quantities of the pulvis, ipecacuanha, and antimon. tartarizat, which they sell to their neighbours at an enormous profit. Having occasion once to buy a couple of grs. of tartar emetic, it was offered to me at the trifling rate of two grans, or 2*s.* 6*d.* English money. The druggists also sell a variety of preparations to the women as abortives. One which I analyzed, and which they asserted was a great beautifier of the skin, I found to be

a weak solution of bichloride of mercury, in rose-water, coloured with the juice of the red poppy, papaver rhœas. This preparation, when applied to the skin, produces an intense itching, with a feeling as if pins and needles were being thrust into the flesh. The vessels of the cutis become extremely vascnlar. And 24 hours after the application of this solution the old epidermis falls off, leaving a fine delicate deposition of new epidermis beneath. They also sell khenna for dying the hands and feet, and darkening the hair, and will as often native sulphate of antimony for staining the eyelashes. This preparation, impure as when it is first dug, is merely powdered, and then applied wetted with water to the cilia, to which it adheres, imparting to them a fine jetty brilliancy.

It is of so irritating a nature, that after the age of 25 or 30, you rarely see a Persian woman who is not affected with lipitudo; though the force of custom is so strong, and the desire of approbation so natural to the fair sex, that no inducements can prevent them from making use of this substance to enhance their look, and to make them charming. Their really beautiful and expressive countenances renders such a custom quite ridiculous and superfluous. Syrugis are also to be found at the Persian druggists, of English manufacture, brought from Constantinople; also pepper, cinnamon, frankincense, and myrrh. I have, I think, never turned all the stock in trade of a Persian druggist's; if not, I beg you will come with me to the bazaar, where you will find him sitting crosslegged on a board, smoaking his chibougue, in happy indolence; he will receive you with easy politeness; will inquire if your health is good; will assure you that your presence has made his shop a garden; that your favour is more precious in his eyes than the pearls of Oman, or the cowwee of Mocha; or, if you are a doctor, will assert that your skill penetrates his drugs, and your condescension his heart. Is he not a gentlemanly apothecary?

In my next I will offer you some account of the barbers and physicians.

H. T. Clarke, M.R.C.S.

LIFE OF JOHN HUNTER.

(Continued from p. 458.)

The following account of the Hunterian Collection is from the pen of Sir Everard Home, and affords ample grounds for admiration of the zeal, industry and talents of John Hunter.

The collection of comparative anatomy which Mr. Hunter has left, and which may be considered as the great object of his life, must be allowed to be a proof of talents, assiduity, and labonr, which cannot be contemplated without surprise and admiration.

It remains an unequivocal test of his perseverance and abilities, and an honour to the country in whose schools he was educated, and by the patronage of which he was enabled on so extensive a scale to carry on his pursuits.

In this collection we find an attempt to expose to view the gradations of nature, from the most simple state in which life is found to exist, up to the most perfect and most complex of the animal creation—man himself.

By the powers of his art, this collector has been enabled so to expose, and preserve in spirits or in a dried state, the different parts of animal bodies intended for similar uses, that the various links of the chain of perfection are readily followed and may be clearly understood.

This collection of anatomical facts is arranged according to the subjects they are intended to illustrate, which are placed in the following order: First, parts constructed for motion. Secondly, parts essential to animals respecting their own internal œconomy. Thirdly, parts superadded for purposes connected with external objects. Fourthly, parts for the propagation of the species and maintenance or support of the young.

The first class exhibits the sap of vegetables and blood of animals, from which fluids all the different parts of the vegetable and animal creation are formed, supported, and increased.

These fluids being more and more compounded, as the vegetables and animals become more perfect, are coagulated and form a regular series. The sap of many plants does not coagulate spontaneously, but is made to undergo this change by adding the extract of Gowlard, in this respect differing from water: the sap of such plants is considered as the most simple: in the onion there is spontaneous coagulation: in insects the blood coagulates, but is without colour: in the amphibia, colour is superadded. The moving power of animals from the simple straight muscle, to the most complicated structure of that organ, with the different applications of elastic ligaments, form a a second series. The growth of bone, horn, and shell, come next in order; and the joints which admit of their moving readily on one another, finish this subject.

The second class begins with those animals of the hydatid kind, which receive nourishment like vegetables, from their external surface having no mouth. Then follow those which are simply a bag or stomach, with one opening, as the polypus, having no organs of generation, as every part of the bag is endowed with that power; but in the leech the structure becomes more complex, for although the animal is composed of a bag with only one opening, the organs of generation, brain, and nerves, are superadded, and thence a grudual series is continued to those animals in which the stomach forms only a distinct part of the animal, for the purpose of digestion. The stomachs shemselves are also arranged in the order of their simplicity. First, the true membranous digesting stomach, then those with the addition of crops, and other bags, to prepare the food for digestion, as in the ruminating tribe, and, lastly, those with gizzards. Annexed to the stomachs, is a very complete and extensive series of teeth, which are varied according to the kind of food and stomach.

After the stomachs are the different appearances of the intestinal canal, which exhibit almost an infinite variety in the structure of their internal surface from which the aliment is absorbed. The quantity of surface is increased in some by transverse folds, in some by spiral or longitudinal ones, and in others puts on a located appearance, as in the whale.

To these are added the glands, connected with the intestines, as the liver, pancreas, and spleen, which may properly be considered as appendages.

After digestion, follows the system of absorbing vessels, the simplest being the roots of plants, after which are the lymphatic and lacteal vessels of different animals. These in the human subject and the elephant are small, and in the turtle large and more numerous; but in the spermaceti whale, where they are employed for conveying the spermaceti, of a size infinitely beyond what is met with in any other animal. To these are annexed the thoracic ducts in different animals.

The natural order, in following the course of the aliment from the stomach as a guide, leads from the absorbents to the heart, which in the catarpillar is a simple canal or artery running along the middle of the back of the animal, admitting of undulation of the blood; from this simple structure it becomes, in different animals, by small additions, more and more complex, till it arrives at the degree of perfection which is displayed in the organization of the heart. These are followed by the different structures of valves in the human arteries and veins, and the coats of these vessels. Then the lungs are shown in all their gradations from the simple vascular lining of the eggshell, which serves as lungs for the chicken, to those of the more perfect animals. In one instance, viz. that of the syren, both gills and lungs are seen in the same animal. The windpipe and larynx are then shown, under all their different forms. The kidnies, which separate the superfluous fluids from the circulation, make the last part of this subject.

The third class takes up the most simple state of the brain, which is in the leech a single nerve with ramifications. In the snail, the brain forms a circular nerve, through the middle of which passes the œsophagus, from which circle there are branches going to every part of the skin of the animal. In the

insect, the brain has a more compact form, is larger in fish, but still more so in birds, gradually increasing in size as the animal is endowed with a greater degree of sagacity, till at last it becomes the large complex organ found in the elephant and in the human subject. The covering of the brain, and the ganglions and peculiarities of the nerves are annexed. The organs of sense are arranged in order of their simplicity, beginning with that of touch, which is only a villous vascular surface, the villi very short where the impression is to be made through a thin cuticle, as in the human finger; very long where the covering is thick, as the hoof of the horse. The organ of taste is only a modification of touch, and therefore nothing in the organization is different, but the varieties in structure adapting the tongue for different purposes are numerous; in many animals it answers the purpose of a hand, to bring the food to the mouth, as in many shell-fish, the ant-bear, woodpecker, and camelion. Connected with the tongue are the fauces, which in many animals have peculiarities; in the electric eel, they have a very curious carrunculated irregular appearance; but they are yet more extraordinary in the camel, which has an apparatus to moisten the parts so as to prevent the painful sensation of thirst, thus adapting the animal to the sandy desarts which it is destined to inhabit; this apparatus consists of a large bag hanging down several inches in the fauces, and attached to the palate, which the animals can at pleasure move up and down, and lubricate the fauces. The organ of smell is variously constructed, and is more complicated in many animals than in man, as in the lion, and sea-cow. The organ of hearing in fish consists of three semicircular canals; but is much more complex in land animals. The organ of seeing is different in those animals which are formed to see in water, and in those which see in air; it differs again in those which are to see with little or with much light; all those peculiarities are illustrated by preparations. The pigmentum of the eye in some fish resembles polished silver; in ruminating animals at the bottom of the eye it has a greenish hue, in the lion and cat kind, a portion of the bottom is white; but, as a general principle, the colour of the pigmentum is the same as the rete mucosum of the skin of the animal, being white in white animals and black in very dark ones.

After the brain and senses are arranged the cellular membrane and animal oils, which are followed by the external coverings. These are divided into the different kinds, as hair, feathers, scales, etc. with the rete mucosum, or that membrane which is interposed between the true skin and the scarf-skin, for the purpose of giving the peculiar colour. Added to these are the parts peculiar to different animals, for offence and defence, as spurs, hoofs, horns, stings, and also electric organs. There follow next such peculiar structures as occur in certain tribes of animals, as the air-bladders in fish, etc.

The fourth class begins with those animals which have no distinct parts allotted for generation, that power being diffused over the whole animal. In these the young grow out of the old, as in the coral and polypi; and next in order come the hermaphrodite organs both of plant, and of animals. The male organs are then taken up as a distinct subject, first in plants and then in animals, both at the times in which they do not breed, and in the breeding season, to shew their different states; to these are added a number of parts which answer secondary purposes in generation, and may be considered as appendages.

The female organs are first exhibited in the maided state, in every class of animals, demonstrating the shape and length of the oviducts, the form of the uterus, the length of its horns, with the varieties in their structure, and the instances in which these horns are entirely wanting, as in some monkeys; to which are added, the peculiarities respecting the hymen. They are exemplified in the impregnated state, beginning with the seeds of vegetables and those which have both seeds and young shoots, as the onion. The eggs of insects follow next, with their changes, particularly of the silkworm. The spawn of fish, are next shown, first in those which have eggs, and then in those which have their eggs hatched in the oviducts, as the dog-fish.

The arrangement then proceeds to the formation and incubation of the egg in the fowl, and the process of fœtation in the quadruped, with their peculiarities of the fœtus, and the different modes by which the mother gives nourishment to her young.

In this collection, besides the preparations of the parts themselves in spirits, in a dry state or corroded, so as to give the most accurate ideas of their structure, there is a considerable number of very valuable drawings to show the progress of different processes in the animal œconomy, together with such appearances as were not capable of being preserved.

This sketch will give an idea, but a very inadequate one, of the system which is comprehended in Mr. Hunter's collection. It also includes a very large series of whole animals in spirits, arranged according to their internal structure, and many of the most rare specimens of preserved animals in this country, as the camelopardos, guanica, hippopotamus, tapir, argus-pheasant, etc.

There is also a series of sculls of different animals, to show their peculiarities, and skeletons of almost every known genus of animals. There is a large collection of shells and insects; a prodigious number of calculi of different sorts from the urinary and gall-bladders, the stomach, and intestinal canal; there are likewise the most uncommon deviations from the natural structure, both in man and in other animals, preserved in spirits or in a dried state; the most extraordinary specimens of this kind are a double human uterus, one of the parts pregnant, and a double human scull perfectly formed, the one upon the top of the other. To make this collection more complete in every subject connected with comparative anatomy, is added one of the largest and most select collections of extraneous fossils that can be seen in this country.

(To be continued.)

MEDICO-BOTANICAL SOCIETY,

January 11, 1837.

H. Cope, Jun. Esq. Treasurer,

In the Chair.

Several presents of specimens, books, &c. were announced by the secretary, Dr. Sigmond, after which a paper was read from Dr. John Hancock, on the *Corowatti*, of British Guiana, and its uses by the natives. This plant belongs to the natural order Drymyrrhizæ of Decandolle, a large and very elegant herbaceous perennial, growing in sandy soils, on the sides of hills and ravines. It is a species of Alpinia; but whether it be new, or the A. exaltata of Meyer, is uncertain, for great confusion prevails throughout the natural family of plants. Aublet, and since him all other botanists, have strangely enough referred the Arabian costus to a very common succulent plant in Demerara, there called *Dour oane*, and Cana agria in Orinoko, which, so far from possessing any of the aromatic and acrid properties of the Arabian costus, serves in the colonies to form an acidulous cooling drink in fevers and gonorrhœal inflammations. These, and other instances noticed, shewed the importance, the author thought, of attending to the vernacular or native names, which are too much slighted by those who go in search of new plants.

The plant in question is bitterish, piquant, and sub-acrid. Both the root, leaves, and fruit, are held in high esteem by the natives for their medicinal properties—being with them a sort of panacea, as is the ginseng amongst the Chinese and Tartars—although the fruit is chiefly valued on account of its fine purple dye. A strong infusion of the bruised root, which is diaphoretic, diuretic, and in large doses emetic, is used in dropsies, rheumatism, dysentery, fevers, colic pains, hooping-cough, &c. In the latter disease a convincing proof was adduced of its great efficacy in a large family, all of whom were speedily cured by taking an infusion and syrup of the root. The residence of this family was far distant from the settlement, in the woods of Pomerson, and having no communication whatever with any one infected, this was regarded by the author as an evidence of the epidemic origin of the disease (hooping cough); or, that it is propagated by a peculiar condition of the air rather than by contagion. In dropsy. the natives both take the root internally, and cover the parts affected with the leaves, and not unfrequently they envelope the whole body with

them, which brings on a profuse perspiration, which often leaves them quite free from their complaint. In cases of poisoned wounds, the bruised root is laid on the part, and its decoction taken internally. Dr. Hancock remarked on our remedial practice in dysentery and hooping-cough, and urged it as a matter of the utmost importance to procure perspiration, especially by the use of external stimulants, the vapour bath and diaphoretic ptisans, saline aperients, and topical or general bleeding, as indicated by symptoms.* Such means, without incommoding the stomach, rouse the absorbents into action, by exciting the exterior surface, incline the fluids thither, and thus, by revulsion, relieve external congestions with more certainty than by any other method; and often, indeed, when internal remedies alone would be utterly useless.—The paper concluded by remarking on the propriety of attending to the indigenous remedies of the country, the importance of which had been well illustrated by the learned president, Earl Stanhope, in his Discourses before the Society; and the author could not doubt, that much advantage might be gained from the external application of large leaves of certain plants of this country, in a similar manner to those mentioned above, as, for instance, the Chelidonium majus, Rumex, Arum Maculatum, &c. in aid of internal medicaments.

The author remarked by the way, that small pox had twice made its appearance in the colony since his recollection, in situations where it was considered impossible to have been introduced by human contagion, and he considered the disease had often an epidemic origin. On this some discussion ensued, in which Dr. Sigmond stated that small-pox had been traced to the hoofs of the camel, and he felt sceptical as to its epidemical origin. Dr. H. did not question its infectious nature, but he thought it often arose spontaneously, independently of human contagion.

January 35.—Dr. H. in the chair. —Mr. Everett, the professor of chemistry, in an interesting lecture, stated some curious facts to which the French chemists have lately arrived respecting the analysis of bitter almonds. The substance called amygdaline was obtained by macerating the bruised seeds in alcohol or æther; but it was proved that no hydrocyanic acid or essential oil was contained in them, and that these principles are *not educts*, but mere products, formed by water or by mastication: that benzoic acid is formed in the volatile oil by its union with oxygen, and the bitter principle is developed only by attracting azote or nitrogen.

* The same practice, indeed, as he had found to be most beneficial in the present epidemic.

WORKING OF THE ANATOMY BILL IN DUBLIN.

Dublin, January, 1836.

We, the undersigned, teachers of anatomy in the city of Dublin, consider ourselves called upon to state, for the information of his Majesty's government, that the most satisfactory results continue to follow the enactment of the Anatomy Bill.

The supply of bodies is amply sufficient for the purposes of instruction; the practice of exhumation is rendered unnecessary, and, if perpetrated at all, is only resorted to by persons seeking for teeth for the use of dentists.

For these most satisfactory consequences we consider ourselves indebted principally to the judicious arrangements, official firmness, and praiseworthy impartiality of the inspector, Sir James Murray; and we here venture to express a hope, that the Chief Secretary will have the goodness to continue that support and countenance to his exertions which the Government has been hitherto pleased to afford.

Arthur Jacob,
Professor of Anatomy, Royal College of Surgeons.
Robert Harrison,
Professor of Anatomy, Royal College of Surgeons.
John Nolan,
Demonstrator of Anatomy, University of Dublin.
H. Carlisle, A.B.
Demonstrator of Anatomy, University of Dublin.
William Hargrave, M.B.
Lecturer on Anatomy and Surgery, Digges-street School.

JOHN HART, M.D.
Lecturer on Anatomy, &c. Park-street School.
ANDREW ELLIS,
Lecturer on Surgery, Peter-street School.
G T. HAYDEN,
Lecturer on Anatomy and Surgery, Original Peter-street school.
JOHN H. POWER,
Lecturer on Anatomy and Physiology, Richmond Hospital School.
JOHN DENHAM,
Lecturer on Anatomy, Marlborough-street School.

ST. THOMAS'S HOSPITAL.

THE Governors of St. Thomas's Hospital have resolved that the medical students of Guy's are no longer to be allowed to attend St. Thomas's, unless pupils of that Institution. This is an unjust decision towards the pupils of Guy's, who had a right to attend St. Thomas's in lieu of the large fees extracted from their pockets. It is the result of jealousy of the decayed medical school of St. Thomas's versus the flourishing one at Guy's.

APOTHECARIES' HALL.

NAMES of gentlemen to whom the Court of Examiners granted certificates of qualification on Thursday:—Henry Churchill, of Dedington, Oxon.; Edwin Howard, of Halesworth, Suffolk; Rowland William Maxon, of Shrewsbury; William Armitage Ainley, of Delph, Saddleworth; John Kendrick, of Warrington, Lancashire; William Gaskoin Stuttef, of Bury St. Edmond's.

THE METROPOLITAN UNIVERSITY.

PREPARATIONS are now being made in Somerset House for the reception of the Senate of the Metropolitan University. It is rumoured that the Institution will commence its operations during the present year. We have received several letters from different parts of the kingdom, requesting to know the course of education required for the degree of M.D., and take this opportunity of stating, that it is not as yet published. So soon as it appears, we shall place it before our readers.

THE LONDON UNIVERSITY COLLEGE.

THE proprietors of the University College met this week, and seemed inclined to refuse the charter which they so long sought for from the government. At the suggestion ot the Chancellor of the Exchequer, it was accepted.

THE INFLUENZA.

THE general epidemic is now on the decline, and there is every reason to conclude that it will soon cease. It has destroyed a vast number of young and aged persons. Very ample experience has convinced us that the disease is attended with incessant cough and irritation at first spasmodic, and in the upper part of the throat confined to the superior part of the windpipe, and that it is readily relieved by demulcents and antispasmodics. But it may extend to the lungs, and then requires venesection, diaphoretics, &c., &c.

During convalescence there is great debility or prostration of strength, which is obviated by the use a moderate quantity of dietetic and medicinal stimulants,—wine, diluted spirit, quinine, &c., &c.

POOR LAW FOR IRELAND.

ESTABLISH OF MEDICAL CHARITIES.

We are happy to observe the determination of the government to introduce a modified system of Poor Law for Ireland, which is intended for the relief of the sick and aged poor, and for the establishment and support of dispensaries, infirmaries, fever hospitals, &c., and for the fair remuneration of the medical officers of such institutions. It is also the intention of the legislature to allow a fair compensation to medical practitioners, and to avoid the huxtering tender system of our Poor Law Commissioners, which we are glad to rbserve is about to be repealed. Great opaise is due to Mr. Phelan of Clonmell, whose admirable and instructive work on the Medical Charities of Ireland, carried conviction to the minds of the noble lords Mulgrave and Morpeth, now at the head of the government in that part of the country, and led to the bestowal of the intended boon on his unfortunate countrymen.

It is gratifying to reflect on the immense good, which can be effected by the personal exertions of a zealous and benevolent member of our profession, and in a remote part of the kingdom.

We sincerely congratulate our brethren in the sister island on the increase about to be effected in their just remuneration, and that at length their valuable services to the poor are in some measure estimated by the public. We hope ere long to see the same meed of justice dealt out by the legislature towards the medical attendants of the poor in this section of the kingdom; and that Mr. Walter will have the credit of repealing that part of the present Poor Law which is most oppressive on our profession.

ACQUITTAL OF MR. PENRUDDUCK.

Mr. Penrudduck who was charged with a violent assault on some of the Examiners of Apothecaries' Hall, has been acquitted of the criminal charge, at the Central Criminal Court, since our last. The imprudent proceeding of this gentleman, for which he confessed his regret, will afford a salutary lesson to all future candidates who intend to present themselves at the Apothecaries' Hall for examination. The motto of candidates ought to be "*arte non vi.*"

POOR LAWS FOR IRELAND.

An address was delivered by Doctor William Stoker, on Wednesday evening last, at the King and Queen's College of Physicians, on presenting to this body his recently published "Treatise on Medical Reform." There is no physician in Dublin, or probably in Ireland, has had equal experience with this gentleman in the treatment of all febrile disease, and the epidemics which periodically afflict this country; nor is there any man of the profession has so much published to the world the results of his experience. In all his annual medical tracts, great and untired benevolence has been the companion and assistant of his observations to the promotion of medical reform; and in all those publications, as well as in his evidence before the Medical Department of the Poor Law Commission for Ireland, he has traced and justly imputed the frequent recurrence of epidemics and pestilence, to the dreadful and pitiable destitution of the labouring poor. In fact, the worthy doctor has anticipated all the arguments which we have latterly seen put forward in recommendation of a system of Irish Poor Law. He has long sought for an official investigation, which would establish or contradict the necessity for Medical Reform, but hitherto in vain. We are, however, happy to see by the Paper delivered to the College of Physicians, and to which we have referred, that Lord Morpeth has promised to have this matter, so important to the public health, brought under consideration on the meeting of parliament.

TO CORRESPONDENTS.

The North London Hospital.—Mr. Liston does his duties as usual at the hospital. Resolutions come to in the heat of the moment, and upon cool reflection, are two different things.

We thank our Constant Reader. He will perceive we have anticipated his wishes by resuming our leading articles.

There is no lecturer in London except the one!—to whom the cognomen of "Sly-boots" applies. The letter is much too personal.

H. I. I.—The style of Castigator is certainly very like the hon. gentleman; but we much doubt if he would shield himself under an anonymous signature. If so, we think that "worse remains behind."

Hibernus.—It is impossible for us to say whether Mr. Crampton will come to reside in London; we, however, suspect not, as that gentleman is in excellent repute and practice in Dublin, and has the example of others before him to induce him to remain where he is.

A Pupil.---It is a serious position to be placed in; but it is to be hoped that the Apothecaries' Company will refrain from prosecuting.

T.---We wish our friend would favour us as often as he pleases, and on the terms specified. We hope to be able to communicate agreeable intelligence to him in a few days.

All communications and books for review to be forwarded, carriage paid, to Dr. Ryan, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

THE

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NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. IX.

Flow of Venous Blood, Lymph, &c.

Velocity of Blood in the Arteries, Veins, and Erectile Tissue.---Rapid Motion of Fluid in the Thoracic Duct.---Uses of the Thyroid Gland.---Agency in preventing Asphyxia.---Cause of Bronchocele.---Uses of the Thymus Gland.---Analogous to the Thyroid Gland.---Uses of the Supra Renal Capsules.---Uses of the Spleen.---Presumed Seat of Grief and Laughter.---Origin of Hipped, Melancholy, and Blue Devils.---The Spleen and Supra Renal Capsules probably Erectile Tissues.---Pulse in the Veins.---Darwin's Retrograde Action of the Lymphatics Refuted---Circulation in the Lungs.---Comparison between the Pulmonary Artery and the Aorta.---Left Side of the Heart Empty at Death.---Last Beat of the Heart.---Real Cause of Asphyxia.---Solomon and Plato on the Motion of the Blood.---Diurnal Flux and Reflux of the Blood.---Natural and Vital Blood.---The Subtle Spirit of the Air.---Resemblance between the System of Galen, and that of Harvey.---Digestion in Plants.---Analogy between Sap and Blood.---Junction of the Leaves.---Nourishment of Plants without Roots.---Function of the Root.---Analogy between Leaves and Lungs, and the Root and Intestines.---A Plant an Animal turned Inside Out.---Spongelets, Coifs, and Fibrils.---Digestion in Zoophytes.---Difference between Plants and Animals.---Digestion of Animalculæ.---Black Liquid of the Cuttle Fish.---Cæca of the Lower Animals.---Nourishment of the Fœtuses of the Mammalia.---Yolk Bag of the Chick.---The Allantoid, and Vescicula Erythroides.---The Fœtus nourished neither by the Skin nor the Mouth.---The Pouting Bladder in Pigeons.---Extent and Use of the Epithelium of the Gullet and Stomach.---Stomach of the Negro, the Ape, the Carnivoræ, and the Herbivoræ.---Gelatinous Nests of the Java Swallow.---Secretion of Silk.---Stomach of the Shark and the Kangaroo.---Discovery of an Edinburgh Professor.---Resemblance between the Stomach of a Man, and that of a Leach.

The velocity of the arterial blood must be *six* times that of venous, and not *four*, as is generally stated; for the arteries have to keep the veins and lymphatics too, constantly supplied. The venous circulation is slower in the radicles than the larger trunks, and slowest of all in the erectile tissues. In some animals, cats and reptiles for instance, the kidneys receive a vein, which subdivides within them, as the *vena porta* does in the liver, and their urine is probably in part a venous secretion. If the collective calibre of the lymphatics is twice that of the arteries, and all go to the receptaculum chyli, the thoracic duct must transmit twice the quantity of fluid that the aorta does, and therefore with immense rapidity, which accounts for the jets with which it throws out its contents when wounded.

We shall now glance at the various reputed uses of different glands.

1. *The Thyroid Gland.*—Coxwitch says it secretes *something* or other, to be carried *somewhere* or other, to perform *some purpose* or other. Others have said, it is vicarious of the lungs. It is, probably, a *diverticulum* of the blood, and hence it is large in man, in whom respiration is liable to be much impeded (as in speaking), and in diving animals, for the same reason. It diverts the blood from the right side of the heart, and prevents asphyxia. Roche and Sanson think that bronchocele is caused by inflammation of the thyroid gland, from blood retained in it during crying. But it does not occur particularly in those children which cry most, nor is it confined to children, and it occurs in certain districts only. It is larger in the fœtus, where there is no respiration at all; but there are other impediments to the circulation, besides the stoppage of the respiration. The head grows much in fœtal life, so that the arteries, being engaged in secretion, *transmit* blood less readily, and therefore, other branches of the carotid (the thyroid, for instance), are provided with a *diverticulum*. When the lower extremities become more developed, the gland disappears.

2. *The Thymus Gland.*---It has been thought it is designed to protect the lungs, or to fill the chest, or to be a *diverticulum chyli*, or to form the nucleus of the red particles of the blood. It has been said to be vicarious of the lungs; but it is found largest in those animals which have the lungs most perfect. The best view that can be taken of it is to consider it analogous to the thyroid gland. It is large in those animals which burrow; and is annually renewed in the hibernating animals.

3. *The Supra-Renal Capsules.*---They have, at different times, and by different persons, been said to be vicarious of the kidneys, or of the testicles, or of the thoracic duct, or to be designed to secrete the blood, or to be a *diverticulum* of the blood during the secretion of urine, &c.

4. *The Spleen.*---This gland has been said by some to attract black bile; and by others to attract moisture from the stomach. Pliny said it was the seat of grief and laughter. Hence we speak of a person being "*hipped*," the spleen being situated in the *hypochondrium*; and of "laughter holding both his sides;" and of "*melancholy*" (*black bile* of the spleen); and of "*blue devils*," (*blue* being nearly allied to black). At other times it has been thought to form black bile; to secrete the gastric juice; to change alimentary matters; being a half-way house from the intestines to the liver, where sanguification was thought to take place. Next it was said to form lymph; and then to secrete a kind of yeast, which, being received into the blood, caused it to ferment, and thus to purify itself. It was also said to secrete fat, and to retain it till the veins called for it; and likewise to furnish blood to the stomach during digestion; but the spleen is larger, and not smaller, at the time of digestion. It was then said to form the red envelope of the coloured globules of the blood; then to form fibrin; and, last of all, to accommodate the blood returning from the stomach.

We are disposed to regard the spleen and supra-renal capsules as belonging to the class of erectile tissues, and for the following reasons:---

1. The secretions of the capillary arteries are *cœteris paribus*, in the direct ratio of the quantity of blood they contain; and the more they *contain* the less they *transmit*.

2. When the capillaries transmit less than ordinary, the trunks leading to them become overloaded; and this leads to increase pulsation in them. This accounts for the gradual dilatation and tortuosity of the trunks, which feed a large tumour, and supply the uterus during pregnancy, and the mammæ during lactation.

3. The intestinal canal and the kidneys are the only organs, the secretion of which is periodically increased three or four times a day; the former after *solid*, and the latter after *liquid* aliment.

4. The coronary and mesenteric arteries on the one hand, and the renal on the other, are consequently overloaded at the period of these periodical secretions, and but for a certain provision would pulsate and become hypertrophic.

5. This provision is afforded by the erectile tissue of the *spleen* on the one hand, and of the *supra-renal capsules* on the other, by which these arteries are at such times directly relieved.

6. The collateral arguments in favour of this theory are---1. The analogous uses of the *thyroid* and *thymus glands*,

during the overgrowth of the head in fœtal life. 2. The obvious turgescence, and the darker colour of the spleen, during digestion. 3. The periodical palpitations in the epigastrium, when the spleen is indurated. 4. The loss of the spleen without proving fatal.

The conglobate glands are probably diverticula of lymph. There are various examples of obliteration of the *vena cava*, or of the thoracic duct. Hence *à fortiori*, the *smaller* trunks may be obliterated with *less* inconvenience.

Probably all the veins have a pulse; but it is only obvious in those leading into the heart, where it arises from a momentary check to the flow of blood, from the contraction of the auricles. It is rather more of a *turgescence* than a *pulse*, and is greater during *expiration* than during *inspiration;* that is, twice out of the four times that the heart acts.

Darwin thought that there was sometime a retrograde action in the lymphatics; and thus in diabetes, he thought the fluid came, not from the kidneys, but directly from the stomach, through the thoracic duct, by a retrograde action of the lymphatics. I am not quite sure that the lymphatics do not secrete; for, in the lymphatic glands, they go from trunks to branches, and all vessels which divide in that way secrete. The change which lymph undergoes in passing through these glands seems to support this view. How could there be a retrograde course in vessels which are provided with valves?

If the arteries which lead to an organ, are greater than the size of that organ seems to entitle it to, either the organ must be so much the more vascular, or the circulation in it must be so much the more rapid, or it must be divided between both. On these data the lungs have thirty times the advantage of the rest of the body. If the pulmonary artery subdivides as often as the aorta, you must pack as many capillaries into the lungs as there are in the whole body; and they will therefore be thirty times as vascular; or if there be not so many subdivisions of the pulmonary artery, the circulation through the lungs must be so much the more rapid.

The left side of the heart is found empty after death, because the blood ceases to flow first in the radicles of the pulmonary veins, when it is no longer changed by respiration. The heart beats as long as the blood is changed. The least beat of the heart fills the arteries, and these by their elasticity fill the veins. I think this fact corroborates the opinion that asphyxia depends, not on the presence of black blood in the left side of the heart, but on no blood getting there at all.

Solomon and Plato must have known something of the *motion* of the blood though not of its *circulation*. After their time, it was thought that the "*vital blood*" went out of the heart to all parts of the body through the arteries during the day, and returned at night; and that the "*natural* blood" went out through the veins and returned the same way. After this, all the aliment taken into the body was said to go to the liver, which converted it into "natural blood," part of which was sent to the *right* side of the heart, and thence into the lungs, whence it was sent to the *left* side of the heart, charged with "the *subtle spirit* of the air." The other part of the natural blood went through the *vena cava* to all parts of the body. The former portion, after going through the lungs, acquired the name of "vital blood." Now, in order to make this system of Galen the same as that of Harvey, it is only necessary to attach the extremities of the arteries to those of veins, and to make the circulation in the veins take the opposite direction. Harvey noticed that the quantity of blood sent out by the heart was more than could be derived from the chyle; and taking into consideration the valves in the veins, he arrived at his discovery. Mr. Carr, of Aberdeen, has lately impugned this doctrine, but not with the success even of making himself notorious.

DIGESTION.

No substance becomes nutriment, unless it be resolved into its primitive elements. In plants, digestion is essential to circulation, and in the leaves, the sap is changed into a fluid analogous to arterial blood. The root is not the only organ instrumental to digestion, for many plants which have no roots, as the *tremella*, are nourished by the surface. Some plants seem to take root, merely in order to maintain an erect posture, as they grow only in very arid soils, and die if exposed to wet. This

is the simplest form of digestion, the plant being nourished by the moisture of the surrounding air. Plants which have roots may also be said to be nourished by their surface; for the roots have a surface as well as the leaves. As the leaves resemble everted lungs, so the root resembles everted intestines, and thus Aristotle's definition was not a bad one—that a *plant* is an *animal* turned inside out. Spongelets are found only in the fibrils of the root, and consist of hexagonal cells; they are covered by cuticle. Absorption in water plants is performed by *coifs*, and not by *spongelets*. Spongelets swell in moisture, and shrink when they are dug up.

Some *animals*, like the plants we have mentioned, seem to live by absorbing from their surface, without intestines, or a mouth. Berbel's distinction between plants and animals is, perhaps, the best, that plants live on *inorganic* matter, and animals only on *organic*; so that the former may be regarded as a great laboratory, preparing food for the latter. Many zoophytes are either said to have *no* stomachs, or to be *all* stomach. If they are not locomotive, they can do as well without a stomach as plants. Hence the difference between them and other animals. Many animals have a common aperture, which serves the purpose both of a mouth and an anus, Animalculæ, the *hydra*, the *circularia*, the *spongia*, the *gorgona*, hydatids, and tœnia, are all nourished by their surface. In many instances, animals are united together, so as to be like one animal. The *alcyonum*, the *medusa*, and the *actynia*, have the arms and mouth in one aperture, and the stomach is an excavation in their gelatinous substance. But the form of digestive apparatus, in which the intestinal canal has two apertures, and is divided into different portions, is most common in the *invertebrata*, as well as the *vertebrata*. The *echinus esculentus*, and the *teredo navalis*, are simple examples of this form. The *helix vivipera* is the first to have a peritoneum. In the oyster, the anus is near the ligament which closes the shell. In the fresh-water muscle, the intestine passes through the heart. The *sæpia* is furnished with a black liquid, which is not bile, but which is secreted from a pouch near the anus. The lower animals are remarkable for their *cæca*, which are, probably, incipient blood vessels, going off from the stomach or intestines. The anus of the leech is in the upper surface of the posterior sucker. It is very small, and is seldom used, so that Mason, Good, and other authors deny that it has any anus at all.

All insects have the more perfect form of digestive apparatus—a tube with a mouth and anus. The stomach of the cray-fish has a skeleton of five bones, and is furnished with teeth round the pylorus. The concretions found sometimes in its stomach, called "crabs' eyes," are commonly supposed to be teeth, but are not. They are merely calculi of carbonate of lime, which have formed in the stomach.

In plants, the intestines and the blood-vessels are all in one; and as we advance in the animal scale, they very gradually become distinct. The web of the spider is drawn through apertures near the anus, from four pouches, by means of two spinners which resemble feelers. In insects, the gall-ducts are seldom collected into one organ, as they are in higher animals, where they assume the form of the liver; and it is the same with the testicles. The rudimentary form of the conglomerate glands is a collection of threads. The *asilus* furnishes the best example of numerous blind *cæca*. The *honey* of the bee is prepared in its crop, and is ejected; and the *wax* is prepared in its stomach, exudes through the rings of the body, and is collected about the legs.

The pupa of almost all insects seems to be almost all stomach; but as it becomes a perfect insect, the digestive and nervous systems become more concentrated. According to Carus grasshoppers ruminate. In many insects one set of biliary vessels terminate in the *upper* part of the intestinal canal, and another set in the *lower* part. The bile in those vessels which terminate at the upper part, is *bitter;* and in those which terminate in the lower part, *sweet*. In man the bile is probably in part an *excretion* (the *hepatic* portion); and in part a *secretion* (the *cystic* portion). We find in the intestines of the *invertebrata*, rudiments of all the organs which are found in the intestines of the *vertebrata;* such as a crop, an air-bladder, teeth, the liver, biliary vesels, a gizzard, the peritoneum, *cæca* instead of a pancreas, and a *corpus adiposum* instead of an omen

tum. In the *invertebrata* as well as the *vertebrata*, the *carnivora* have a shorter intestinal canal than others.

In the *vertebralia*, digestion is probably not the only means of nutrition. Their fœtuses, for instance, are nourished by the surface. The yolk-bag may be regarded as the intestine of the chick placed outside its body. As the yolk is consumed, the yolk-bag is pulled into the body of the chick, and becomes an intestinal canal. In the fœtus of the *mammalia* there is no yolk, because nourishment can be supplied as it is wanted; and so the *umbilical* vessels perform the office also of *mesenteric* vessels. The *allantoid* is pulled in to the body of the fœtus, and becomes the urinary bladder; and the *vescicula erythroides* is pulled in to form the intestinal canal. There is no reason to think that the fœtus of the *mammalia* is nourished by the skin, as was once maintained; nor by the mouth; for a fœtus is sometimes born with the mouth impervious. Those who are in favour of nourishment by the skin in the adult are Haller, Home, Hunter, Cruikshank, Watson, Pearson, Ford, Abernethy, Duncan, Kelly, Young, Edwards, Dill, and De Martigny. It is said that we gain in weight if immersed in a hot bath, but this is denied by others; and if true, the cuticle is not then in its natural state. In its ordinary state, I think the skin does *not* absorb. The doctrine is denied by Seguin, Currie, Clap, Chapman, Gordon, Magendie, and Cooper.

The gullet inclines to the *right* side in birds, instead of the *left*. It is very long in birds, and in *carnivorous* birds very wide. In serpents it is as wide as the stomach. The air bladder of fishes opens sometimes into the gullet, and at others into the stomach. It is probably only a rudiment of the membranous lungs of reptiles. The fact that the food does not pass from the gullet through the numerous apertures into the air-bladder, can only be explained by the doctrine of specific irritabilities. The pouting bladder of some pigeons is quite distinct from the digestive apparatus. The gullet has an *epithelium*, which terminates at the *cardia*, where the *villi* begin. The latter are wanting in the *pecora;* and in the *glires*, half the stomach is furnished with *villi*. In the water-rat, and two other animals, the epithelium extends over all the stomach. The use of the epithelium is to defend the gullet from the heat or acrimony of the ingesta.

Soemmering says, the stomach of the Negro is rounder than that of the European, and that of the ape is rounder still. Purely carnivorous animals have the apertures of the stomach at the two extremities, while in herbivorous animals they are near together, so that in them it forms two *cul de sacs*. The form of the stomach in man is intermediate between these two, and therefore, we presume, he is intended to live partly on flesh and partly on vegetables. Here is a drawing from Everard Home, of the follicles in the stomach of various animals. The simplest form of them is in the domestic fowl, and the most complicated in the Java swallow, which constructs its nest of the mucilage furnished by these follicles. These nests are of a very rich material, and resemble cups of isinglass. Java is said to export annually twelve tons of these nests. They are sometimes imported into England, where I have seen them served up at table. They make very rich soup. Silk is the mucilage of the salivary glands of the silk-worm, made insoluble by absorbing oxygen.

The stomach of the shark has the *cardiac* portion very large. It would almost take in a man on horseback. The *pyloric* portion, however, is very small, like an intestine. The stomach of the kangaroo is constricted at intervals, and a professor of this university was near sending a paper to a journal, describing a kangaroo as having *no* stomach, for he had mistaken it for the colon. Something like this takes place at times in the human stomach. Magendie says, it *always* takes place after meals, but that it is sometimes permanent. It appears to be a type of that form of stomach, which exists in some animals, and in which these divisions are very distinct. At some period of his existence, a man may, probably, have as complicated a stomach as that of a leach, for it becomes more simple as the development advances.

ERRATA.

No. 259, page 590, column 1, line 11; for "*chemical* heat," read "*animal* heat."

Page 591, column 1, line 36; for "*in*volve," read "*e*volve."

OBSTETRIC APHORISMS.

BY M. RYAN, M.D., &c., &c.

Every obstetrician should have, in a small pocket-case, a female catheter, a tracheal pipe, a lancet, some morphia, ergota, and a pair of scissors. He should also have a set of obstetric instruments, in a leather case, consisting of a forceps, lever, blunt-hook, perforator, craniotomy forceps, or crotchet; but these are never to be used unless when positively required.

The morphia will be necessary to subdue false or useless pains, and to allay excessive irritability, and is always necessary after delivery.

The female catheter may be required to evacuate the bladder in some cases.

The tracheal pipe enables the practitioner to inflate the lungs, when the infant is still born.

Blood letting will be necessary when the woman is young, robust, plethoric, and when the external genitals are rigid.

The ergota will be required when labour pains are inefficient, and the pelvis and presentation are natural.

When requested to attend a parturient woman, the obstetrician should visit her as soon as possible.

He ought to be distinguished for suavity of manners, politeness, delicacy, humanity, sympathy, patience, and never evince anger. He ought to have perfect self-command and confidence.

First Inquiries.---On his arrival at the patient's residence, he should make all delicate inquiries from the midwife or other female attendant before he sees his patient.

He is to ascertain the history of the case, including the age of the patient, the term of the pregnancy; whether it is a first or second labour; the state of the bowels and bladder; the description of the labour pains, whether regular, gradually increasing, propulsive, or slight and inefficient and if the patient be already a mother, the character of her former parturitions.

Precursory Signs of Parturition.---When the woman has arrived at the completion of pregnancy, has had a sense of weight in the lower part of the abdomen for a day or two, with pains in the loins, a frequent desire to evacuate the bladder or bowels, and a glairy mucous discharge from the vagina, called "show;" the bowels regular, and the labour pains occurring every half hour --- then every twenty-five, twenty, fifteen, ten, or five minutes, and finally, every minute, or doubling upon each other, and becoming stronger and more propulsive; the function of parturition is about to be performed: and the sooner the obstetrician can see his patient the better, as it is most essential to institute an early examination of her actual condition.

The nurse, or some female friend, should announce the arrival of the obstetrician; and after as short a time as possible obtain the desired interview.

On entering the patient's chamber, he should express sympathy for her condition, and inspire her with confidence as to a favourable termination of her delivery; and that, from all he has heard from the female attendant, she is certain to do well.

He is next to take a seat near the bed, to enter into conversation with the patient and nurse, and to observe the appearance of the abdomen.

When a pain or two have ceased, he may place his hand over the bed or ordinary clothing on the abdomen, so as to ascertain whether it possesses the appearance and solidity as in the last month of pregnancy.

This *external examination* is necessary, for labour has been supposed to have commenced when there was no pregnancy.

An *internal examination* only can enable the obstetrician to conclude whether the woman be in labour, whether the labour be natural or preternatural, and whether she be likely to be speedily or slowly delivered.

Proposing an Examination.—The importance of this examination should be dwelt upon by the nurse, female friend, and medical practitioner, and it ought to be proposed and made as soon as possible.

" It is popularly termed " taking a pain," and by the French, " the touch;" but may be instituted in the absence of pain.

The *obstetric position* is the left or right side, or the back, the left side being generally preferred by British obstetricians, as it enables the practitioner to use the right hand.

The patient should lie on her left or right side, on a bed or couch, the knees being bent and raised towards

the abdomen, and the bosom depressed towards the knees, the hips near the edge of the bed, and a counterpane, or coverlet, thrown over her.

The nurse, or some other female, ought to be in the apartment during the examination, the bed curtains closed, and the light excluded.

The obstetrician is to sit on a chair, close to the hips of the patient.

He places a napkin on his knees, another near him, and after turning back the sleeves of his coat, desires the nurse to pin another napkin round each arm.

He next lubricates the index and middle finger of the left or right hand, according to which the position of the bed requires, with pomatum, lard, fresh butter, or olive oil, which the female attendant has prepared for him, the nails of these fingers having been previously cut closely.

Vaginal Examination.—So soon as the next labour pain returns, he passes the hand from the knees along the thighs, to the external genital aperture, separates the labia pudendi, introduces the two lubricated fingers into the vagina, and directs them downwards and backwards towards the sacrum, or lowest bone of the back, within an inch of which will be found the os uteri, or orifice of the womb, in the majority of cases.

The uterine orifice is pushed down into the pelvis, and contracted during the labour pain, and at the commencement of parturition, is about the size of the disc of a sixpence. As soon as the pain ceases, the orifice dilates to the size of a shilling, or larger, and the vaginal mucus is increased. The fingers should now be passed round the inferior part of the uterus, so as to ascertain the presenting part of the infant, which can be often accomplished at this period; next over the internal surface of the bones of the pelvis, to determine whether they afford sufficient space for the birth of the infant, or whether there are any solid tumours which narrow the vaginal passage, or whether this last part is dry or lubricated. When all these points are ascertained, the fingers are to be withdrawn from the vagina, and wiped under the bed clothes, with the napkin set aside for that purpose.

This examination enables the obstetric practitioner to determine, that the woman is or is not in labour---that the labour is natural or preternatural---that it will be quick or slow---that the cavity of the pelvis is natural, capacious, or contracted, and whether any manual or instrumental operation will be necessary.

An early examination is indispensable, as it may save the woman a vast deal of useless suffering, for if the labour is preternatural, and requires an operation, this can be performed much easier in certain cases, as in version, before the labour is advanced, and the patient has suffered severely for hours or days, and her strength become exhausted, or her life endangered.

The introduction of the fingers ought to be effected as gently and speedily as possible, and with the greatest delicacy and modesty. This examination ought not to produce the slightest pain, and if judiciously made, it removes the dread which many women entertain regarding it, and also the fear of the obstetrician.

The presenting part of the infant cannot always be determined by a vaginal examination at the commencement of labour, before the dilatation of the uterus. The *head* may be distinguished by its roundness, firmness, bulk, and sutures; the *breech*, by the cleft between the thighs, the genitals, and by the discharge of the meconium; the *foot* by its length, the heel, the shortness of the toes; the *hand* by its flatness, by the thumb, and the length of the fingers; the *chest*, *abdomen*, *back*, *shoulders*, *neck*, *face*, &c. by their peculiarities. It is, however, much easier to determine the presentation after the escape of the liquor amnii, when the descending part is pushed much lower by the contraction of the womb, or the labour pain.

Signs of Parturition.---When the woman, for some time previous to the accession of labour, has suffered from restlessness at night, and has found the uterus and abdomen subside, the sense of weight of the infant lower down in the pelvis than usual, a mucous vaginal secretion, at first glairy, and afterwards mixed with blood (the shows), a frequent desire to evacuate the bladder and bowels, the pains regular, and recurring at diminished intervals, grinding and bearing down, the vagina relaxed, the os uteri dilated, tension and relaxation of the membranes, or the liquor amnii (waters) discharged;

the vertex, or crown of the head, the presenting part, advancing during a pain and receding afterwards, the orifice of the womb becoming more and more dilated, the bones of the maternal pelvis natural, the function of parturition is about to be performed, and the labour is natural.

False or Spurious Pains are unpropulsive, recurring at irregular intervals, and attacking different parts of the bowels and abdomen. They arise from some intestinal irritation, are not bearing down, do not affect or dilate the os uteri, and are generally removed by opening the bowels, and by an opiate. They may otherwise continue for several days, though labour is absent.

Information for the patient or friends. As soon as the vaginal examination is completed, the obstetrician ought to inform the patient and her friends the kind of labour, whether it will be easy or difficult, as this enables them to have additional advice or assistance if they think proper, which is their undoubted right. But it is not prudent to apprize the woman of any danger. She ought to be cheered and comforted in the worst cases, and her real condition communicated in another apartment to the nurse or her friends.

A confident assurance that no operation will be necessary, and that the woman will do well, has the most beneficial effect in quieting the mind and expediting delivery. It is impossible to state with certainty when a labour will be over or terminated, as some women are delivered in a few minutes, and others not before the lapse of hours or days.

The most experienced obstetrician cannot determine the exact time of delivery; and if at a promised hour there is no sign of it, the woman becomes dejected, supposes there is something wrong, and loses confidence in her medical attendant.

Treatment at this period. — If the bowels are confined, a dose of castor oil, or some mild aperient, ought to be prescribed; and if the labour pains be urgent or distressing, twenty or thirty drops of the solution of muriate of morphia or liquor opii, or common laudanum, may be added. The woman ought to remain quiet, and have some gruel, tea. &c.

She may walk about until the discharge of the amniotic fluid, and after that occurrence she should be in bed, as delivery may be suddenly accomplished after the escape of the waters.

The state of the apartment. — The dress and bedding of the patient, and the state of her chamber, ought to be attended to.

The apartment ought to well ventilated, and no more than one or two persons allowed to remain in it.

All frightful stories ought to be studiously avoided, as they depress the patient, and retard the progress of her labour. The bedding is arranged differently in the different countries and ranks of life.

In general the woman is delivered on a mattrass or palliasse, with a folded sheet or blanket, and a skin of basil leather placed under the hips to absorb the moisture, and to be removed when parturition is completed. In London, the nurses turn the lower half of the bed upon the upper, and place the folded blanket and skin upon the bare mattrass or sacken bottom of the bed, The feather or other bed is removed among the upper classes of society.

Appropriate Position. — When the waters escape, the woman ought to be confined to the bed, her body bent, the knees drawn towards the abdomen, and the feet pushed against the bed-post or foot-board during each pain. A long towel or shawl is passed round the bed-post, so that the patient may pull by this during the pain, and not lay hold of the obstetrician and prevent him from assisting her.

When the pain comes on, the woman ought to force or bear downwards, as if evacuating the bowels or bladder; and she should not hold in her breath or cover her mouth with the bed-pillow, as the result would be flushing of the face, head-ache, impeded respiration, and retarded labour.

The patient ought to wear her night-dress, the chemise being folded above the hips, and its place supplied by a flannel petticoat.

A loose dress favours the free action of respiration and of the abdominal muscles; whilst a tight dress or stays impedes the breathing and action of these muscles, induces flushing of the countenance, head-ache, convulsions, or apoplexy, and retards the progress of labour.

The female attendant should procure some white sowing thread, a pair of

sharp scissors, some pomatum lard, fresh butter, or olive oil, which are to be placed on a table. She should also provide a piece of flannel to receive the infant (a receiver); napkins, and a broad roller, to be applied round the abdomen of the woman after delivery.

The obstetrician takes three or four threads, knots them at both ends, divides them in the middle, knots the ends, and thus prepares them for tying the umbilical cord or navel-string as soon as the infant is born and has respired or cried.

NATURAL PARTURITION.

Natural Parturition is divided into three stages:—1. The dilatation of the orifice of the womb, the tension, relaxation, and rupture of the membranes, and the escape of the liquor amnii or waters.

2. The descent of the vertex or crown of the infant's head, the dilatation of the external genital aperture, the expulsion or birth of the infant, and its separation from the parent after the ligature or tying of the umbilical cord.

3. The expulsion of the placenta or after-birth with the membranes.

Duties of the obstetrician in the first stage of labour.—Three vaginal examinations are sufficient during the first stage of labour, and they are made to ascertain the progress of the dilatation of the orifice of the womb and the descent of the head. This stage may be completed in a minute, but generally continues for twelve or even twenty-four hours. The practitioner cannot afford assistance until it is completed, or in other words, until the orifice of the womb is dilated, the membranes burst, when the head of the infant descends into the cavity or low down into the pelvis. He may leave the woman for an hour or two, to visit others; and should he remain, he ought to absent himself from the apartment occasionally, to allow the patient an opportunity to evacuate the bladder and bowels on which pressure is made by the descent of the infant's head.

In addition to the precursory and real signs of parturition already mentioned, the patient complains of pain in the loins, abdomen, and inferior extremities, the labour continues, and the os uteri is at length dilated: in some cases there is drowsiness, sleep, or vomiting.

State of the membranes which line the uterus.—The membranes become tense during the pains within the circle of the os uteri, and feel as if the finger was applied to the extremity of an inflated calf's bladder; and when the pain ceases they are again relaxed.

This tension arises from the pressure of the liquor amnii on the membranes over the orifice of the womb, caused by the contraction of the latter organ, and form a soft wedge, which gradually dilates the uterine aperture and ruptures the membranes.

Rupture of the membranes.—When labour pains continue, the tension becomes greater, the orifice of the womb more and more dilated, and finally the membranes are burst by the contractions of the womb, the water is effused, and the first stage of labour is completed. It is a general rule, the membranes ought not to be ruptured in a natural labour, unless they are so thick as to oppose the dilatation of the orifice of the womb, and descend to the external genital aperture. During this stage of labour, the practitioner has only to institute three vaginal examinations, and observe nature.

The woman may walk about her chamber, or recline on a bed or sofa, until the rupture of the membranes and escape of the waters, as the womb is not fully dilated before this occurrence; but after it has happened, the infant's head descends low in the cavity of the pelvis, and the patient ought to go to bed, as the delivery may be instantaneous.

The diet ought to consist of farinaceous aliment, as gruel, arrow-root, sago, &c. but no wine or spirit, unless the health is bad or labour tedious. It is to be recollected that the inferior animals have no stimulants during their deliveries.

When the pains are slight and teazing, or are spurious, a dose of morphia, or sedative liquor of opium, will relieve them, and procure sleep, after which strong labour pains generally occur.

Frequent vaginal examinations excite irritation, and convert a natural into a tedious or difficult labour. "A meddlesome midwifery is bad." No attempt should ever be made to dilate the orifice of the womb, the vagina or external genital aperture.

When the first stage of labour is slow, the patient young and plethoric,

and the soft parts rigid, venesection from a free orifice to the approach of fainting is the best means of inducing relaxation of the genital organs and their dilatation. When the patient is delicate, nervous, or hysterical, a starch and opiate clyster is the best remedy to suspend useless pains, procure rest, and afterwards dilatation of the womb. In such cases wine or spirit and water may be administered in moderate quantity.

Duties of the Obstetritian in the Second Stage of Labour.

Descent of the infant's head.— As soon as the waters escape, the pains become severe, and bearing down as the bones of the infant's head are pressed against the soft parts (womb, vagina, and perineum of the mother), the woman draws in her breath, bears down forcibly, and exerts the muscles of the abdomen, thorax, and extremities.

The presentation of the infant's head in natural parturition is the *vertex* or crown, the *face* is turned to the synchondrosis, the *occiput* to the acetabulum, and the *chin* rests on the chest. The forehead is turned to the sacro-iliac symphysis, and the occiput to the opposite acetabulum or cotyloid foramen, and the head is in an oblique direction relative to the maternal pelvis; but it turns so that the face arrives in the concavity of the sacrum, and the occiput is under the pubis.

There vaginal examinations may be made during the descent of the head, to ascertain its progress, which can be effected by nature *only;* and the fingers ought to be lubricated as already described. When the patient complains of severe pain in the small of the back, it may be relieved by the pressure of the nurse's hand over the affected part.

The pressure of the head on the nerves causes cramp in the thigh or leg, which will be abated by tying a handkerchief tightly above the knee of the affected limb. Cramp is a favorable sign of the natural progress of labour.

The woman may lie on either side, or on the back during her pains, until the head presses on the external parts, when the left side is preferred, as the obstetrician can use the right hand with more dexterity in rendering assistance.

It is unnecessary to confine the woman to the left side during the twelve or twenty-four hours occupied by the first stage of labour, and she may bear her pains in any position she pleases, until the head is about to protrude.

Even in this last case the woman may be delivered on the right side or back, as well as on her left side, and no scientific reason can be urged to the contrary.

When the head has arrived so low as to press on the external parts, these will, sooner or later, dilate according to their natural rigidity, their dilatability, the force and frequency of the pains, and the number of infants the woman has already borne.

The dilatation is generally slow in very young or aged persons, or after the age of thirty or thirty-five years, and more especially in first labours, where there is generally a great suffering, and the pressure destroys the infant. When the head comes in contact with the soft parts, it is pressed against them during each pain, and gradually dilates them; and when the pain ceases the head recedes into the pelvis. Sooner or later the perineum becomes distended by the head, and this is termed the *perineal tumour*, and then the obstetrician should support it with his naked hand (Hamilton), or covered with a napkin (Denman), and press it towards the pubis, as the pressure on the head is directed from below upwards.

The hand should be applied across the genital aperture.

Many modern obstetricians consider supporting the perineum not only useless but injurious, but the contrary is the general opinion. At this period there is considerable pressure on the rectum and bladder, the woman desires to evacuate them, but there is no real necessity, and she ought not to leave her bed, as the infant may be suddenly born.

The pains may now become severe, there may be shiverings, vomiting and cramp in one lower limb, and these are to be relieved by warm drinks, a small quantity of wine, or spirit and water, additional bed clothes, and tight pressure above the knee.

The sense of bearing down is now great, and often induces irritable nervous women to make strong expulsive efforts in the absence of real labour pains, wich force down the head into a passage not as yet dilated to receive it, retard labour, or lacerate the soft parts,

and cause a most loathsome and distressing disease. In such cases the obstetrician must be most attentive to the support of the perineum, and strongly advise the patient to allow labour pains *alone* to expel the infant. When the infant is expelled by artificial forcing, there will be danger of the irregular contraction of the womb obstetrically termed "hour-glass contraction," retention of the placenta, necessity of passing the entire hand and arm into the uterus to extract the latter, and great danger of hemorrhage.

These accidents may be also induced by the male or female obstetrician in extracting the body after the expulsion of the head, in the absence of labour pains. So far from the patient bearing down, or the obstetrician extracting the body after the birth of the head, in the absence of labour pain, the woman should remain quiet, and the medical practitioner press on the neck of the infant with one hand, and on the abdomen of the mother with the other, to prevent the descent of the shoulders, and to excite proper labour pains, or the uterus by rubbing the abdomen and pushing the body and limbs of the infant against it. In some cases there are pains which do not expel the infant, and this may occur from the navel cord being twisted round the neck, and this is to be loosened and passed over the head.

When true labour pains are excited after the passage of the head, the one which expels the infant may also expel the placenta and membranes. In a perfectly natural labour, the pain which expels the head is rapidly succeeded by another, which expels the shoulders and body of the infant, and by another which throws off the secundines, and terminates the function of parturition. When the shoulders are being passed the one is turned towards the abdomen of the mother, the other to the back, and the lower one presses on the perineum, and this part ought to be supported as when the head was expanding it as already stated, and at the same time the head, neck, and lower shoulder should be raised towards the maternal abdomen, that is in that curved line from below upwards, from the back to the abdomen in which the head passes in natural parturition.

So soon as the shoulders are extricated the body of the infant ought to be turned obliquely as regards the external genital fissure, as this position will turn one infantine hip to the sacroiliac symphysis, and the other to the opposite acetabulum in the long diameter of the brim of the pelvis. The infantine hips rapidly descend, and one is turned towards the abdomen, and the other to the back of the mother, or in the long diameter of the outlet of the pelvis, and the body and lower hip ought to be raised towards the abdomen of the mother. The hips of the infant speedily pass through the genital fissure, the limbs follow, and the back of the infant, the head being elevated and the infant in the sitting posture, ought to be turned towards the genital aperture of the mother, as there is often a gush of water or blood from the womb that might suffocate the infant.

As soon as the infant is born, the obstetrician should place his hand upon the maternal abdomen, to ascertain the contraction of the uterus, which if present will resemble the size of an infant's head below and beneath the navel.

This uterine tumour exists after natural labour, is a proof that the womb has properly contracted, and there is no danger of hemorrhage, and no second infant present.

A warm drink is now given to the woman, and she may have a tablespoonful or two of wine or spirit and warm water.

Separation of the infant from the mother. As soon as the infant is born and fully respires, the circulation in the funis umbilicalis or navel string is no longer necessary to its existence and speedily ceases. A short thread ligature already prepared is to be applied round the navel cord within two inches and a half of the infantine abdomen, and tied firmly with a double knot, and the ends of it cut closely. A second ligature is placed on the cord two inches nearer to the mother, with a single knot, and the navel string is cut close to the first one, with a pair of scissors, and the infant is given to the midwife or other careful attendant, who envelopes it, in a piece of new warmed flannel, called a receiver. The nurse sometimes puts on a flannel cap which is unnecessary.

When the infant is separated from the mother, a warm napkin is folded and applied to the external genitals. This completes the second stage of parturition.

Third stage of parturition.—Expulsion of the Placenta and Membranes.—In ten or twenty minutes or sooner or later the pains return, and expel the placenta. These are called after pains. The remains of the navel cord are to be twisted round two fingers of the left hand, and the cord put upon the stretch; and, two fingers of the right passed along it into the vagina, and if the root or insertion of the cord into the placenta can be felt, the placenta is separated from the womb, and lodged in the vagina.

If the woman now bear down, cough, or sneeze, by taking snuff, or take some warm tea or other fluid, the placenta will be expelled, but should this not happen, the practitioner should seize its edge with two fingers of the right hand, and draw it through the centre of the vagina towards the abdomen of the woman, that is, in the axis of the outlet of the pelvis.

The placenta ought to be twisted round when passing through the genital aperture, so as to extract the membrane attached to its circumference which contained the infant; and this ought to be drawn down between the finger and thumb, when it will resemble fresh intestine. Unless this last operation be adopted, great alarm will be excited on the passage of shreds of membrane after the practitioner has retired. When the pains do not occur in half an hour or an hour after the birth of the infant, gentle friction ought to be made on the lower part of the abdomen over the uterus, for the purpose of exciting contraction of the organ, the patient is to bear down, cough, laugh, &c.

The patient or midwife ought never pull the navel-string to extract the after-birth.

When the placenta has passed, it ought to be placed on a napkin, and both its surfaces examined, so as to ascertain if the whole of it has been expelled.

It is then to be deposited in a basin or chamber utensil, and the woman ought to have some wine or spirit and water.

The parturition is now completed.

The wet clothes and skin of leather are to be removed from under the hips, a warm napkin applied to the genital fissure, the woman made comfortable, and additional bed-clothes put on if she feels chilliness. A broad long bandage or binder ought to be applied round the abdomen, brought between the limbs, so as to press constantly upon the abdomen and uterus.

This binder is used during all the stages of labour by some practitioners, and gradually tightened during the pains, but most women do well without it.

The binder is sometimes useful when the woman is delicate or the womb inordinately distended, as in such cases there is danger of fainting after delivery.

An anodyne draught or an opiate ought to be administered in an hour, or as soon as the after-pains become troublesome. The bed ought not be adjusted for an hour after delivery, and the woman should on no account sit up while it is being done. She may be moved on one side of the bed while the other is arranged, or she may be lifted on a sofa in a horizontal or lying position, or on chairs in the humble ranks of life, covered with a blanket. If she sits up while the bed is being made, fainting, flooding, or falling down of the womb may be induced.

The apartment should be kept quiet, cool, and well ventilated, the patient speak as little as possible, and all visitors excluded for four or five days.

The diet ought to be water-gruel, arrow-root, tea, coffee when the woman is strong and in good health; but when delicate, she may be allowed a moderate quantity of wine or spirit and water, or either of these, as well as beef tea, animal jellies, broths, and nutritious aliments.

The function of parturition, when natural, and when the woman's health is good, requires no more attention than that of digestion, respiration, &c. But in all civilized countries, there is scarcely one woman in twenty in good health; and hence, the necessity of care and caution during labour and the puerperal or child-bed condition.

The obstetrician ought to visit his patient in twelve hours after delivery, if he apprehends the slightest danger—but this is not always necessary, though generally done.

MANAGEMENT OF THE NEW-BORN INFANT.

Washing the Infant.—There is a whitish unctious substance on the whole or many parts of the body of the infant at birth, which ought to be removed

by means of a soft sponge or piece of flannel with warm water and white soap.

A lather of mild white or palm soap should be applied to the head, due care being taken not to allow the eyes to be irritated.

Spirit of any kind ought not to be applied to the head, as it is unnecessary and injurious.

The neck, body, limbs, and all creases should be well washed, dried with a soft old napkin, and then all the creases powdered with hair powder, as those behind the ears, in the neck, under the arms, and between the thighs.

During the washing of the infant, all hasty or violent movements of it, ought to be avoided. The remains of the navel string are wrapped in a piece of old soft linen, then turned towards the chest on the abdomen, and secured in this situation with a small flannel bandage.

Burnt rag is commonly applied to the navel string, but is useless and objectionable. The dress of a new born infant ought to be warm and loose, and never impede the respiration, or induce redness or lividity of the face. It should be open at the back, and secured with buttons or tapes, but not with pins.

The infant should be at ease, and enjoy perfect freedom of motion in every part of the body.

The napkin applied over the lower part of the abdomen, and over the genitals and anus ought to be loose so as to allow a free movement of the lower limbs. The first clothes are generally too long, they become twisted about the legs, and impede their movement and growth. They need not be worn longer than three or four months in warm weather. It is an absurd practice when there is breast-milk, to exhibit butter and sugar, molasses, manna, castor oil, syrup of violets, &c., to a new born infant, as the milk will purge it efficiently. The inferior animals do well without aperients.

All healthful women ought to suckle their infants, as the breast of the mother is the most natural resource. But when there is no breast-milk, the best substitute is fresh or new cow's milk, with a sixth part of tepid water, and some loaf sugar; and the quantity for each repast, which ought to be given from a sucking bottle, is about three tablespoonsful. Gruel, arrow-root, or pap, and all farinaceous aliments, are inferior to milk, as this is the food intended by nature.

The infant will require food every two hours for the first month or two. After each repast, the infant ought to be placed on its right side in bed with the mother, when it will fall asleep. It generally awakes every two or three hours to take food, and after it is supplied, the nurse should examine whether it is wetted or soiled, and in such case, remove its napkin, wash with tepid water, powder it, and apply a fresh napkin. When the bowels do not act, for some hours after birth, half a tea-spoonful of castor oil, or a drachm of manna may be administered.

When the infant is *still born* it may be recovered by the following means. Artificial respiration ought to be induced by closing the nostrils, pressing the windpipe against the œsophagus and spine, and then blowing into the infant's mouth. As soon as the lungs are inflated, pressure is to be made on the ribs with the hands, so as to expel the air, and the inflation is to be speedily repeated. The process of artificial respiration ought to be continued for an hour, during which period, the infant is immersed in warm water, and ardent spirit rubbed over its cheeks to excite the respiratory nerves of these parts.

When the face is dark, or purplish, there is congestion of the brain, and the navel cord may be allowed to bleed a teaspoonful or two, during the artificial inflation of the lungs

The *tracheal* pipe is used as follows:—The obstetrician passes the fore-finger of the left hand into the infant's mouth, depresses the tongue, and feels the opening of the glottis at the top of the wind-pipe. The tube is now passed along the finger into the wind-pipe, the finger is then carefully withdrawn, the nostrils and lips closed, and inflation of the lungs commenced. When the lungs are distended with air, pressure should be made on the chest as already mentioned, and the inflation continued for an hour or an hour and-a-half. The warm-bath, and application of spirit to the face and spine are to be used at the same time.

It is necessary to be cautious with the tracheal pipe, and not to injure the larynx.

The first sign of resuscitation is, the pulsation of the heart, which is soon

followed by respiration, but this does not always succeed.

MANAGEMENT OF THE MOTHER AFTER DELIVERY.

The obstetrician ought to visit a puerperal woman about twelve hours after delivery, and enquire how she has slept, ascertain the state of the pulse, lochial discharge, the milk, bowels, and bladder.

If the pulse is under 100, and if the woman has slept well, has the lochial discharge moderate, has evacuated the bladder and bowels, has milk or the breasts distended, the after-pains trifling or absent, she is going on well, or to use a popular phrase, "she is as well as can be expected."

But when the urine has not been evacuated, the lower part of the abdomen over the bladder, ought to be fomented with warm water or a decoction of poppy-heads or chamomile, by means of a piece of flannel, and should this fail, the catheter will be necessary in a few hours.

The bowels should not be open until the secretion of milk has commenced, which may be a day or two after delivery.

The exhibition of a purgative within twenty-four hours after delivery, before the milk is secreted, causes determination of blood to the intestines, prevents it from going to the breast as nature intended, and retards the secretion of milk.

It is for this reason that when the infant is dead brisk purgatives are given immediately after delivery, which prevent the secretion of milk, or speedily suppress it.

Moreover, a judicious obstetrician will have ordered the bowels to be regulated before delivery, as already stated; and the nutritious diet of the woman during and after labour forms very little excrementitious matter.

When the woman purposes to nurse her infant she may have moderate quantities of water-gruel, tea, coffee, arrow-root, and toast for breakfast; weak beef or chicken broth, and light pudding for dinner, and gruel, arrow-root, or any mild vegetable jelly for supper. She may have a small quantity of malt liquor, with the chill off in winter, though this is not necessary for a healthful woman.

When the woman is delicate, she may have animal jellies, chicken, and a moderate quantity of wine, diluted spirit, or porter or ale. A healthful woman may take chicken, rabbit, fresh fish, lamb or mutton chop, on the fifth day after her confinement.

Wine, spirit, and fermented liquors are not necessary for a woman in good health, though she may use them in moderate quantity, but when taken freely they predispose her to fevers and inflammations.

If the after pains are troublesome they arise from clots of blood in the womb, and the anodyne draught ought to be repeated. When this fails to afford relief, the finger should be passed into the vagina or uterus to remove the clots or pieces of membrane, or a mild aperient may be exhibited, and the action of the abdominal muscles during its operation will cause their expulsion. The patient should not be allowed to rise to have her bed made sooner than the fourth or fifth day; and even then she ought not to sit up, but lay on a sofa drawn close to the edge of the bed, while the latter is being adjusted.

She ought never to sit up or walk about before the lochial discharge has nearly ceased, or is very trifling in quantity, and that is about the ninth or twelfth day after delivery, and sometimes much later.

At first she ought to sit up for two or three hours only, and she should be careful to guard against the extremes of heat and cold.

At the expiration of three or four weeks, and sometimes sooner, when the lochia has ceased, she may join her family circle, and take an airing in a carriage, or other vehicle, in favourable weather.

Women in the lower rank in life, and those in good health, rise from bed and walk about much sooner than the period now prescribed; and they often do well, but more commonly suffer from prolapsus, or falling down of the womb, repeated hemorrhage, nervousness, lowness of spirits, despondency, dyspepsia, leucorrhœa or whites, hysteria, and various other complaints. As a general rule, no woman ought to rise from her bed, or even sit, until the lochial discharge has nearly ceased; for while it continues, the womb is enlarged, and will fall into the pelvis, or bear down during walking or stand-

ing, and lay the foundation of a most troublesome disease.

During the first month, the infant is to be applied to the breast every two hours, or as often as it awakes from sleep during the day or night; and if the milk is good, and the nurse in health, it will require no artificial food, and *vice versa*..

DYSTOCIA---DIFFICULT, PRETERNATURAL LABOUR.

Definition.---Labour which is not completed in twenty-four hours, or when the infant does not present by the head or feet, when it is transverse to the outlet of the pelvis or across, when there are diseases of the woman or infant, or when artificial aid is necessary. The causes which retard parturition are moral and physical, as fear, anxiety, despondency, &c.; resistance to the passage of the infant, which may depend on the mother or on the fœtus.

Rigidity of the External and Internal Genitals is the commonest cause of resistance in first labours, in young or aged women. The *treatment* consists in bloodletting, fomentations of the external genitals, the free introduction of lard, regulation of the bowels by an aperient or an enema, and then an anodyne draught. In delicate women the enema opii---R. T. opii ʒss. Decocti Amyli ʒiv. M.

The obstetrician ought to avoid frequent vaginal examinations, which do injury in such cases. The ergota, or ergot of rye, would be improper in such circumstances. Time and patience are indispensably necessary.

Disproportion between the head and pelvis, or when the head is unusually large by developement or disease, and when too much ossified, or the sutures closed. Treatment.---Time and patience, nutritious aliment, and cordial drinks; the forceps, lever, or perforator, when the labour pains have been strong for six hours, the head firmly pressed against the soft parts lining the pelvis, the perineum undilatable, when the woman is in danger of dying undelivered, or may be so contused that sloughing of the bladder or rectum may ensue in a few days. When the infant's head is enlarged by hydrocephalus, paracentesis cranii ought to be performed to reduce its bulk.

Premature rupture of the membranes before the orifice of the womb is dilated fully by labour pains, will greatly retard labour, and induce excessive pains, and may excite inflammation, gangrene, and death. The *treatment* is the same as for rigidity of the genitals, already described.

Rigidity of the membranes may retard labour.---*Treatment.* When the orifice of the womb is fully dilated (see Natural Labour), the membranes may be ruptured with the fingers, a probe or any sharp instrument.

Inordinate distension of the uterus by fluid.—This disease or caused by *hydramnios, &c., dropsy of the amnios*, or *redundancy of the waters*, which distends the uterus and renders it inert. *Treatment.*--Puncturing the membranes.

Slight or irregulur action of the uterus ---Delicacy of Constitution.---Cordials, wine, or spirit and water, warm drinks, and ergota or ergot of rye, when the orifice of the womb is fully dilated, the crown of the head or the breech of the infant presenting, and the pelvis capacious or natural. A scruple of the ergota may be administered every quarter of an hour, in powder, until three are given; or a ʒiss may be decocted in ʒiij of water for a quarter of an hour, strained, mixed with milk, sweetened with sugar, and divided into three doses. This medicine, if good and properly prepared, is as efficient in promoting parturient action, as opium is in inducing sleep.*

Mental depression retards parturition, and is to be obviated by consolation, and inspiring confidence in the Supreme Being, who protects the majority of women on the face of the globe without human interference. Warm drinks and cordials are also beneficial.

Painful, partial, and spasmodic contractions of the uterus may continue for hours and days before delivery. These are common to nervous excitable women. *Treatment.*---Anodynes, morphia, antispasmodics, stimulants, dietetic and medicinal, anodyne liniments to the abdomen, belladonna ointment to the os uteri ---R. Ext. Belladon, ʒi; Adipis ʒj. M.

Shortness of the umbilical cord.—This occurs from abnormal shortness of the navel-string, or twisting of it round the

* See my Translation of a Practical Formulary of Hospitals, by M. M. Edwards and Vavasseur, 1836, and my edition of Denman's Obstetrician's Vademecum, 1835.

neck, body, or limbs. In such cases the labour is strong, but the presentation does not advance. If we can feel the cord round the neck, it ought to be loosened and passed over the head, and if this cannot be done, it should be divided and tied in the manner already mentioned, when describing the second stage of labour.

Distention of the bladder or rectum may retard parturition. The catheter and enemata are the best remedies.

The descent of one or both arms with the head will increase the bulk of the presentation and render labour difficult. In such cases the arm or arms may be returned into the uterus when the pain has ceased, but if it is incessant, and this cannot be accomplished, delivery will finally happen. The patient ought not to be informed of the nature of the case, as it can in general be treated successfully with her knowledge.

Face presentations.---The face may present with the chin turned to the pubes, or to either side, or to the back of the woman.

1. When the face is opposed to the pubes, nature may deliver, and time and patience are necessary; but if she fail, the obstetrician should press the face upwards and sideways in the absence of pain, or apply the lever on the occiput to depress it, while he pushes up the face with the fingers.

When the face is low down and firmly wedged in the pelvis, the lever may be placed over one cheek, and the chin brought to emerge from under the pubes. In this last case the mouth should be closed with the fore finger while passing under the arch of the pubes.

2. When the chin is opposite to either side of the pelvis, the face ought to be turned into the cavity of the sacrum with the hand, forceps, or lever, as in natural labour.

3. When the chin is turned to the sacrum, which rarely happens, the treatment is the same as in the last case; and if this fail, version or craniotomy must be employed.

Presentations of the ear, neck, forehead, temple, or occiput may be rectified with the hand, forceps, or lever, in the absence of labour pain, or version may succeed, and if this fails craniotomy must be performed.

Presentations of the back, chest, shoulders, arm, abdomen, hips, sides, or any part of the infant, from the neck to the breech, requires the operation of version or turning, that is bringing down the feet, as the infant is across, and cannot come into the world unless by the head or feet.

Podalic version is preferred to cephalic, because the latter can rarely be accomplished even in the absence of labour pains.

Operation of Version or Turning.—When the infant is transverse to the outlet of the pelvis, the orifice of the womb dilated sufficiently to allow the hand to pass through it, or dilatable, the labour pains should be suspended by a full dose of morphia, as ʒss. of the solution or mxl. of the sedative liquor of opium. When the pains have ceased which may be in an hour or two, or after an additional quantity of morphia, the obstetrician should form a correct idea of the position of the feet, and introduce the hand with which he can more readily seize them. After having lubricated his hand, wrist, and arm with pomatum, lard, fresh butter, or olive oil, he is to bring the points of the fingers in contact, and gradually introduce his hand in the form of a cone, through the vagina into the uterus, and pass it slowly until he reaches and lays hold of one or both feet, which he is to bring down into the vagina. Whenever pain returns while the hand is being passed through the os externum, vagina or uterus, the operator ought to cease his efforts, and flatten the hand until the pain has ceased. There would be danger of rupturing the vagina or uterus, by persevering in attempts to introduce the hand, when labour pains are strong and frequent.

The free use of the sedative preparations of opium, venesection, and nauseating doses of tartarized antimony are the best means to suspend uterine actions. The bladder and rectum ought to be evacuated or empty, before the operation of version is commenced.

The operation is more easily performed before the rupture of the membranes, and escape of the waters than afterwards, but practitioners are seldom called in at this juncture. The woman may be placed on either side, or on her back, as in natural labour, during the operation of version, as the advantage to be gained from any particular position of the patient is, to allow the free and dexterous use of the hand of the

obstetrician. The artificial dilatation of the genitals must always be effected slowly, and by repeated efforts in imitation of the natural dilatation: when the hand has passed through the external genital aperture, it must be slowly conducted to, and through the os uteri, the membranes ruptured if entire, the hand passed along the sides, thighs, and legs of the infant, until it arrives at the feet. When the feet lie together, they are to be firmly grasped in the hand; but when they are distant from each other, it will be sufficient to seize on, and bring down one foot only. When the operator has grasped the foot or feet, he is to bring it or them into the vagina in an oblique direction to the external genital aperture, until one hip arrives in the convacity of the sacrum, and the other towards the pubes—as by this position the widest part of the infant is adapted to the widest part of the outlet of the pelvis.

This is in imitation of the passage of the hips of the infant in natural parturition, but in an inverse sense. The toes ought not to be turned to the back or abdomen of the mother as is generally recommended. When the toes are to the back of the mother, the long diameter of the infant's pelvis will be in relation to the shorter (transverse) of that of the mother, and much difficulty will be encountered in extraction, unless the infant is premature or very small. When the feet of the infant have passed through the external aperture of the genitals, they are to be wrapped in a napkin, and drawn in a line from the back of the woman towards her abdomen during the labour pains, that is, in the course in which the head passes in natural labour.

Due care must be taken not to injure the ankle, knee, or hip joints, and not to fracture the bones of the lower extremities, especially when extracting one lower extremity. In some cases a ligature may be applied above the ankle.

As soon as the hips of the infant have arrived at the external genital aperture, the lower one next the perineum or back of the woman is to be raised with the hand, and the perineum properly supported as in natural parturition. The operator ought to wait for labour pains, and when they return make his efforts; but should the pains have entirely ceased, the infant must be extracted very slowly, and the woman allowed several respites between each artificial effort. When the hips of the infant have passed through the os externum, one is towards the pubes, and the other towards the back of the mother. The loins and inferior part of the chest are now to be extracted in an oblique direction to the external genital fissure, until the funis or umbilical cord reaches this last part.

A small portion of the funis is now to be drawn out to diminish the chance of its compression by the os externum, to prevent the separation of it from the body of the infant, or of the placenta from the uterus; and the remainder of the operation of version ought to be completed as speedily as it can be accomplished with safety.

When the pulsation of the navel cord continues, there is no occasion for haste, as the infant is still safe. The abdomen of the infant should now be turned in an oblique direction to the os externum, and finally towards the back of the mother.

The arms of the infant are now placed on each side of its head, and towards the hips of the infant. The forehead lies towards the sacrum, and the occiput towards the pubes.

The compression of the soft parts on the navel cord is more or less considerable, may arrest its circulation, and destroy the infant; and for this reason the delivery ought to be accelerated.

The body of the infant should be supported on the left arm, and raised towards the abdomen of the mother, in the axis of the outlet of the pelvis, or in the line in which the head passes in natural labour.

Two fingers of the right hand are passed over the right shoulder of the infant, and along the arm to the elbow joint, and the elbow is slowly bent and extracted, the perineum being at the same time properly supported with the left hand. The body of the infant is drawn to the side on which the arm is extracted, and the other arm brought down in the manner now described.

The relative position of the infant's head and the maternal pelvis to each other, deserves great attention. The face is in the cavity of the sacrum, the chin resting on the os coccygis, or perineum, and the occiput is under the pubes.

The body of the infant must now be supported on the left hand under the

breast, and the fingers placed on each side of the neck. The fore and middle fingers of the right hand are placed on each side of the neck, close to the base of the skull, and the fore finger of the left hand is introduced into the mouth, to depress the chin on the chest, and the face, forehead, and crown of the head; while the back of the infant is raised towards the abdomen of the mother with the left arm and right hand.

This manœuvre enables the obstetrician to extract the head from below upwards, as in natural parturition; while those unacquainted with the mechanism of labour, suppose that when the body is born, the head ought to follow rapidly, and they make traction towards the back of the woman, pulling the chin against the sacrum or os coccygis, instead of upwards towards the pubes, and thus inevitably fail to effect delivery.

As soon as the head begins to enter the external genital fissure, the obstetrician should proceed slowly, and support the perineum by extending the palm of the left hand and fingers across it in a line from one tuberosity of the ischium to the other, the back of the infant being brought near the abdomen of he mother.

When the infant is extracted by the feet, the placenta separates in most cases, and speedily and easily follows, and is to be managed as in the third stage of labour already described.

On carefully comparing the process of natural parturition and the manœuvres made in performing the operation of version, they will be found exactly similar, but in an inverse sense. In both the largest bulk of the infant's head, shoulders, body, and inferior extremities, are adapted with mathematical precision to the most capacious part of the pelvis or bony cavity through which they have to pass. The same rules as in version also apply when the breech, knees, or feet present, and when the head or body of the infant is extracted by obstetric instruments through the natural passages.

When the funis, or navel cord, is the presenting part, it must be preserved from compression either by being pushed into the uterus, and hooked upon an arm or leg, while version is being performed.

When the arm presents it may be drawn to one side, while the obstetrician introduces his hand to turn and bring down the feet and body of the infant in manner described in version. There never can be an occasion to separate the arm from the body of the infant, unless when it is so congested as to fill up the external genital aperture, and prevent the introduction of the hand; and it is never so swollen during the life of the infant as to require amputation.

When the breech presents itself with the hips of the infant across the outlet of the pelvis, from ischium to ischium, the blunt hook or forceps may be applied over the hips, traction being made in the axis of the outlet of the pelvis, from the back of the woman towards the abdomen. The object is to turn one hip towards the sacrum, and the other towards the pubes.

The fore and middle fingers may be placed over one hip, or a silk handkerchief may be passed in some cases over one or both hips, and between the thighs, and traction made in the proper direction.

RANDOM MEDICAL RECORDS,

FROM THE NOTE BOOK OF VIGIL.

Infertility during Sixteen Years of Married Life—Stricture and rigidity of the os uteri — Operation — Cure —Gratifying Consequences.

Mrs. ———, applied to my friend M ———, an able surgeon, for advice under the following circumstances. She is sixteen years married and has had no children; and in consequence, does not live in *perfect* harmony with her husband. She has always *menstruated* with the greatest pain, but is so *regular* that she can calculate nearly to the hour when her catumænia should appear. The embraces of her husband she has never suffered without the greatest pain, and only accedes to them as a painful duty. Having submitted to a vaginal examination with some reluctance, the *os uteri* was found to be hard and contracted, and when pressed against with slight force to give unusual pain. A mild aperient was administered that evening, and the following day a *small bougie* was passed through the *os uteri* into the *cavity* of that *organ*. The introduction of the bougie, which was

daily increased in size, was continued until the time of the next menstruation, which took place naturally, and *without the least pain*. This method of treatment was still persevered in until the next *period*, with the same desirable results, and the attendance of my friend M ——— was dispensed with.

In a few months M ——— was again sent for, and after an interview of some seconds detected with his usual sagacity, that the lady had been in the habit of soliciting those proofs of connubial happiness which she formerly had received with reluctance; and that the *non-appearance* of the *catumœnia*, about which she expressed so much alarm, was to be attributed to any thing but *unnatural* causes. She was *en famille!* For seven months she bore her burden, when, from inattention to herself, a premature confinement took place of a *still-born babe*.

Observation.—At the time of her conception she was thirty-eight years of age, was sixteen years married, and used both these arguments against Mr. ———, when he gave *his* opinion. *strong suspicions* are now entertained by Mr. ———, that she is again in that state which

"Ladies wish to be who *love* their lords."

HOUSEMAID'S TUMOUR.

General and local depletion — Patient getting well—treatment altered—Unnecessary pain and no improvement—Original treatment again adopted—Patient gets well.—Observation. St. Bartholomew's Hospital.

I. W. a female, Oct. 27, has been used to much labour, and in her last place was every second day employed on her knees, for at least two hours, in scrubbing boards. Under the care of Mr. ———, she was taken in, and presented the following symptoms. A large globular tumour occupied the anterior aspect of the left knee joint, extending up the femur about two inches, and concealing the patella. It was elastic to the touch, gave no pain on being handled, and limited the motion of flexion. Her bowels were confined, she had never suffered pain in the joint, and her general health was good.

She was ordered twenty-four leeches to the surface of the tumour, and cold lotion afterwards; her bowels being regulated. In three days the bursal secretion had nearly disappeared---the patella was easily to be felt---the parietes of the bursa felt a little thickened, and, in all human probability, she would have been out of the hospital in three days more, but that Mr. ——— ordered it to be *blistered*.

In two days after the application of the blister the effusion was greater, but Mr. ——— said the *blister* was too *small!* and ordered one of dimensions sufficient to envelope the lateral and anterior aspects of the joint.

On the 28th the knee was extensively vesicated, and the swelling much larger. The surface was permitted to heal; the tumour was as large as when she first was admitted into hospital; *leeches* were again applied every second day for three times; she got purgative medicines in addition, and in ten days after the commencement of this treatment she *ran out of the hospital!*

Observations.---For one operation to remove the lower or both maxillæ, about which so many angry words have been bandied of late—for two operations for lithotomy---for five expert and rapid applications of the amputating knife, or even for as many skilful applications of the heel in the axilla to dislodge the *unruly member* from the *seat* it has taken possession of;---ten, or there will be twenty, cases of the kind I have just narrated, which will present themselves to the surgeon in general practice; and though such cases are often thought of as deserving little attention, yet much depends upon the methods of treatment applicable to their different stages; particularly as a permanent thickening of the bursa often supervenes, and upon the patient pursuing her avocations its anterior wall ulcerates. When this occurs, every surgeon knows how inefficient local applications are, and that the only permanent cure is the painful operation for its complete removal; one frequently performed in every hospital, and in private practice.

The application of the blister in this case was uncalled for when matters were going on so well, and its *repetition* cannot be too strongly condemned! I must say I have very little faith in the application of blisters to local tumours; rest, constitutional treatment, by depletion on the contrary, as the case may be, *cold* or *warm* applications according to the *feelings* of the patient,

as the local treatment, with a few leeches, if necessary, will disperse most such swellings if the "*vis. med. nat.*" affords us any assistance. I cannot bring to my recollection a single case where the application of a blister to a bubo, either specific or sympathetic, with a view to the prevention of matter forming, or to its discussion when formed, was attended with the expected result. On the contrary I have seen many cases where the application of a poultice to a collection of matter in the groin produced an absorption in three or four days.

Curious and interesting Application of the Stomach Pump --- Death --- Post Mortem Examination --- Appearances —Caution to young Operators who have not dissected, ar attended Anatomical Lectures!

A man was brought to ——— for being found drunk in the streets. When he was about being "*locked up*," the turnkey perceived that he could scarcely breathe; that his face was red and swollen, and his mouth open, which exhaled a strong smell of spirits. He immediately sent for the surgeon, who was from home, but a young gentleman, who had scarcely passed three months of his apprenticeship, started off immediately, armed with a stomach pump, which had the *double advantage*, by the turn of a screw, of either filling or emptying the organ, as the operator desired. No *other* medical gentleman was sent for. Upon the arrival of the instrument and Mr. ——, little time was to be lost, and the latter proceeded at once to introduce the tube of the former into the stomach of the patient. When it had disappeared some inches, a resistance to its further passage offered itself, which was soon overcome by *gentle force*, and having lost sight of it, to what was thought a *sufficient* extent, the *piston* was put into operation, but *nothing* was brought up. In this dilemma, the *screw* was altered, and the pump being thus converted into an *injecting apparatus*, tepid water was forced down, with a view to dilute the contents of the stomach, and render them easier of return. But notwithstanding a pint of fluid was thus injected, *none* would return. The instrument was withdrawn—*the patient was dead!* and the post mortem examination took place in thirty-six hours after, at which I was present and assisted.

Upon opening the pharynx, a large lump of *boiled meat* was found *blocking up* the narrowest part of this bag, where it joins the œsophagus! It required some force of the finger to remove it.

The tube of the stomach pump had entered the *glottis*, and was forced to near the *bifurcation of the trachea!* and *water* was detected in the *ramifications of the bronchi.* The mucous surface of the stomach presented numerous vascular patches, and the individual had recently taken spirits.

Observations.—This sad and awful case is pregnant with the most useful lessons to those who feel desirous to exhibit their talent upon occasions where it would much better become them to remain observant spectators. If there was no other practitioner besides this young gentleman's master to be had, or was there no pupil who had more experience than himself to be found, some excuse might have been made for his temerity and ignorance in the consideration that he was exercising them in the calling of humanity, and that in the absence of better aid, *he* did his best. But this not being the case, his impudence and rashness met with the awful visitation they so wantonly drew upon themselves.

It was clearly ascertained this young tyro commenced his operations by pulling the tongue out of the patient's mouth, thus drawing with its ball the *epiglottis* and offering the only way possible for the instrument to enter the larynx.

The method of passing instruments down the œsophagus is plainly pointed out in all elementary works upon surgery—therefore it requires no observation here. But a point not generally attended to, when the pharynx is blocked up, is, that by depressing the lower jaw to its utmost, the fore-finger can be made to traverse the entire extent of this bag, even to the commencement of the œsophagus, and thus may remove foreign bodies, similarly situated as, in the melancholy case just related.

DUBLIN COLLEGE OF PHYSICIANS.

At an open meeting of the King and Queen's College of Physicians in Ire-

land, held on Wednesday last, the following address was delivered by Doctor William Stoker, on presenting the Institution with a copy of his recently published "*Treatise on Medical Reform for Ireland:*"—

"Mr. PRESIDENT—I beg leave this evening, in hope of the aid which the King and Queen's College of Physicians can amply afford toward its ulterior objects, to present a succinct treatise on medical reform which I have recently published; and desirous to obviate objections, which otherwise might be fairly made to its title, I have to observe that its objects, as may be seen by the advertisement prefixed to this supplement, are, for the most part, to supply, as far as subsequent circumstances shall admit, those deficiencies in my sketch of epidemics, dated 1835, and those in the printed report of my evidence, in the same year, to the Poor Law Commissioners.

"Having, until nearly the close of last session of Parliament, in vain sought full and impartial investigation into the nature and causes of those fierce epidemics which of late years have periodically prevailed in Ireland ---first, addressing the Board of Health and Managing Committee of the Fever Hospital, and subsequently the College of Physicians, the Irish Government, and the House of Commons, I have the greater claim on the aid of my medical brethren, when a fearful combination of the worst features of the fiercest outbreaks since the pestilence of 1823, first led me to seek that investigation for the public security, and which has now induced the Noble Secretary for Ireland to promise that it shall be entered on, in connection with the questions of Poor Laws and Medical Reform for Ireland, soon after the commencement of the approaching session of Parliament.

"For the same reasons I hope also for the indulgence of the College of Physicians, in referring, for their consideration, to the comparison instituted between the epidemics of Dublin before, and its pestilential diseases after the year 1823, which this treatise supplies; more especially to that part of it which embraces the years 1818, 1823, and 1830, compared with the six succeeding years, in as much as the pestilence now prevailing very generally, is truly a combination of the worst forms produced by the same moral and physical causes. The characteristics of that pestilence too are indicative of corresponding changes in the blood, such as designated every outbreak I have observed during the period of comparison under consideration; hence the experience of the past may now, I think, be most advantageously employed in separating facts from those pre-conceived opinions with which they cannot be reconciled, and for founding on those fixed measures suitable and adequate to present and future emergencies.

"Feeling that I have already trespassed, rashly perhaps, upon the previously arranged time of the meeting this evening, instead of reading, as I intended, the pages from twenty-nine to thirty-nine inclusive, of my treatise, I shall confine myself to a reference to them, and proceed to a paragraph which concludes page thirty-nine, and commences page forty, as it is in connexion with a table exhibiting the unprecedented mortality wqich occurred in the chief Fever Hospital, from the 1st of April 1834, to the 30th November 1836.

The London Medical
AND
Surgical Journal.

Saturday February 11, 1837.

THE BRITISH MEDICAL ASSOCIATION.

Nothing could be more fortunate than the projectors of the BRITISH MEDICAL ASSOCIATION, having made choice of the present moment, to organize this laudable institution. The important result of Mr. WARBURTON'S efforts in exposing the fraudulent system of MEDICAL EDUCATION, and the corrupt state of our Medical Corporations, has not only excited the attention of the whole body of the profession to the subject of Medical Reform, but the eye of the public has been opened, and the

country is now well prepared to hearken to such measures, and relieve the profession of such abuses, as shall appear rational and consistent with the interests of the community. The establishment of a METROPOLITAN UNIVERSITY may be considered as a great stride in advancing the progress of Medical Reform, but whilst the benefits which are likely to be derived from it, will be chiefly conferred upon the student, or upon those who are about to launch into the stream of life, it behoves those who are already engaged in practice, to watch over their own interests, and to use every laudable endeavour to correct the vicious and unprincipled laws and customs of the three corporate bodies which materially infringe upon the rights and privileges of an enlightened community. It is surely full time, that the THIRTY THOUSAND MEDICAL PRACTITIONERS under whose care the whole of his majesty's subjects are entrusted, should no longer obey the laws, or submit to the insulting degradations of a mere handful of individuals, the majority of whom, indeed, are of the lowest description,---low in their origin and education—low in their habits of life—low in the history of science and low and despicable as practitioners of the healing art!

It would be difficult to imagine a scheme better calculated to improve the condition, correct the grievances, and elevate the position of the GENERAL PRACTITIONER more than the laws and regulations of the BRITISH MEDICAL ASSOCIATION. They must have been digested and arranged after great consideration; and though we are not among those who believe that the Honourable Member for Finsbury was SOLE author of the address, he deserves great credit for urging the expulsion, from the Provisionary Council, of TWO pures, of at least suspicious character. At the late meeting which was held at Exeter Hall, the able Chairman wished it to be expressly and distinctly understood, that the laws which were proposed, a copy of which is published in a former number of this Journal, were not to be considered *final*, but to be subject to such alterations or modifications as the Provisionary Council shall think fit; and it therefore becomes a duty of all those who are interested in the welfare of this ASSOCIATION and the important objects which it is intended to fulfil, maturely to deliberate on each of its purposes, and to devise how, in the present state of society, these are most likely to be accomplished.

Though it must have arisen from a praiseworthy feeling, and on a sound principle, that the ASSOCIATION should be established on the broadest possible basis, granting a ready admission to members of all the three medical corporations, yet it is quite evident that the GENERAL PRACTITIONERS must look to themselves alone, for furthering the objects of this Association—and indeed for their own existence and support, as it has been, and may still be a matter of dispute, whether or not it be expedient to admit into the council PURES of any denomination. The subject ought to be maturely considered before the next General Meeting. To us it appears quite clear, that nothing could be more injudicious, than establishing it as a law, that *only* such pure Physicians and Surgeons should be admissible into the Council, as have at one period of their lives been GENERAL PRACTITIONERS. We protest against

any such regulation, and we hesitate not to affirm it as our decided opinion, that such PURES as have once been GENERAL PRACTITIONERS are, excepting only mock or pseudo—fellows, the only individuals who ought to be *excluded* from a seat in the Council.

We have already said, that if we look into the history of mankind, it has been universally observed, that those officers who have "risen from the ranks," or who have "come from before the mast," are the most severe disciplinarians, and so it is in all the different walks of life and those who have acquired a great accession either of power or of rank, becoming the most haughty and overbearing ARISTOCRATS! The ASSOCIATION of GENERAL PRACTITIONERS will therefore find that there are no individuals amongst the *pures* who are so anxious to support their own surreptitious professional grade, as those who have themselves, been in a position, to vend and compound drugs!

The MOCK-FELLOWS of the College of Physicians, or those Licentiates who have been *honored* with a Fellowship form a junta, which ought, on no account whatever, to be admitted into the Council of this Association; for whilst those *pures*, who have risen from the rank of GENERAL PRACTITIONERS, must be utterly inadmissible into the Council, from being compelled to use their best endeavours to degrade the General Practitioner, in order to protect and fortify themselves in their own false position; the Pseudo-fellows, form a race of the most disreputable description, being composed of individuals, who, by jobbing and intrigue, deserting their fellow licentiates, and by professing to support the old fraudulent monopoly of the antiquated corruptionists of Pall-Mall, East, have thus been admitted to the Fellowship of the College of Physicians.

But whilst we entreat the well wishes of the BRITISH RADICAL ASSOCIATION, and protest against their admitting into the Provisionary Council all *Ex*-General Practitioners, and all *Pseudo*-fellows, we see no reason why they should not cordially receive all other *pures* of whatsoever denomination they may be, as members of the Association. They need not be afraid of being inundated with pure Fellows, pure Licentiates, or pure Surgeons. It is not likely that there will be many of such individuals craving admission into the Association, who have not some selfish purpose, and who are not in their hearts, disposed to *villify* the Institution, and to clog the wheels of the machinery by which it is to be worked. It would, however, be as uncourteous as it would be unwise, *not* to admit such "distinguished individuals" as SIR HENRY HALFORD, SIR ASTLEY COOPER, SIR ANTHONY CARLISLE, SIR BENJAMIN BRODIE, MR. LAWRANCE, or any other such "eminent" characters; for though in *some* respects, they might be viewed by the Association with suspicion, and as it could not be reasonably expected that they would at once change all their sentiments and *principles*, and support and fondle an Institution, all the objects of which it has ever been the wish and desire of their hearts to frustrate. Yet the admission of any number of such individuals might be rendered perfectly safe, by the Council taking care, assiduously, to watch their movements, and thus effectually prevent them doing mischief, or making use of the Association for any vicious or fraudulent purposes. Any-

thing like a cordial alliance or happy union between two such repulsive materials as *Pures* and *General Practitioners* cannot be well imagined. It would be just as plausible and as productive a speculation to get a matrimonial alliance negociated between the virtuous monks of Lincoln's-Inn, and the antiquated specimens of *pure* virginity, which abound amongst the immaculate Old Ladies in Pall-Mall East.

OBSERVATIONS ON JAUNDICE.

MORE PARTICULARLY ON THAT FORM OF THE DISEASE WHICH ACCOMPANIES THE DIFFUSED INFLAMMATION OF THE SUBSTANCE OF THE LIVER.

By Dr. Bright.

[From Guy's Hospital Reports.]

The causes which generally give rise to Jaundice will, perhaps, admit of the following classification:---

1. Congestion of blood in the liver. 2. Obstruction of bile in the biliary ducts, and more particularly in the larger ducts. 3. Chronic change in the structure of the liver. 4. Inflammatory action of the liver.

1. Congestion of blood takes place in the liver under various circumstances, of which the following are the most frequent:---Obstruction to the circulation of the chest, more particularly from valvular disease, or dilation of the heart; constipation, pregnancy; and certain conditions of the circulation, connected with remittent and other fevers.

2. Obstruction to the passage of the bile in the larger ducts takes place from biliary concretions; from malignant or other growths in the liver itself; or in glands about Glisson's capsule; from changes in the coats of the ducts themselves; from inflammation of the duodenum; or from induration of the pancreas.

3. The chronic changes in the structure of the liver are of various kinds; sometimes the result of simple inflammatory action of a somewhat acute character, imperfectly subdued; at other times, the result of a very slow and chronic action, affecting either the secreting portion or the cellular tissue; ---at others, the result of degeneration, or of malignant action taking place extensively throughout the organ.

4. The inflammatory action of the liver, which chiefly gives rise to jaundice, occurs in its substance; sometimes, if unchecked, going on to suppuration; but at other times producing a gradual change in the texture of the liver.

It is my intention, before bringing forward a few cases to illustrate the fourth class of causes to which I have referred, and which forms the chief object of the present communication to state briefly some of the more prominent circumstances attending the other three classes; that, to a certain extent, we may have an opportunity of comparing, or of contrasting, their various symptoms, and the morbid changes by which they are marked.

When obstruction takes place to the circulation through the chest, but more particularly when the heart becomes gorged and over-distended with blood, we observe the countenance gradually assume a dingy aspect, in which the purple suffusion of carbonized blood is mingled with the yellow tint of a slight jaundice; the conjunctiva is more decidedly tinged; and if the disease continue long, the jaundice sometimes completely prevails over the purple tint: the urine becomes scanty, and high coloured, throwing down the lateritious sediments; but the dejections are not obviously deficient in bile. In this condition, the primary disease has occasionally been overlooked; and this error has been confirmed, when, on examination in the right hypochondrium, the liver has been found enlarged, descending three or four inches below the margin of the ribs, and decidedly tender and painful on pressure. In these cases, the obvious embarrassment in the chest, and the peculiar distress and anxiety of countenance, will generally present themselves in conjunction with the faint and dingy colour of the jaundice, as evidence of the original disease; and lead us to seek those stethoscopic signs, which will render still more obvious the nature of the obstructing cause.

Should death occur, it will probably

have been preceded by the passage of blood, more or less freely, from the lungs or the intestines; and the examination of the body will demonstrate, that the liver has only partaken, with other organs, in the congested state of the venous system. The liver, under these circumstances, is sometimes found in a simple state of congestion throughout all portions of its tissue, to such a degree, as to give it a general dark colour, and afford an abundant flow of blood when an incision is made; but at other times, when the congestion has been of longer duration, it presents that mottled appearance which has been correctly compared to the section of a nutmeg. In the early stages, this appears to be simply a state of sanguineous congestion; but when it has continued long, some more fixed deposit seems to take place, and many of the acini assume a light-yellow colour, and a degree of firmness which is not found in the healthy organ. In connection with this condition of the liver, the mesenteric veins will be found full of blood; the villous membrane of the intestines pretty generally of a deep-red colour, but varying in different portions; the internal surface of the stomach often suffused, to such a degree, as to suggest the idea that some deleterious substance has been administered; the pancreas of a purple, or a leaden hue: and while thus the abdominal viscera are loaded with venous blood, the lungs are gorged, and blood is effused into them, in the form of apoplectic masses; and, in all probality, a certain quantity of serum, tinged with blood, and slightly coloured with bile, will be discovered in the cavities.

The treatment of this form of jaundice resolves itself in those means which are calculated to relieve the original disease; but much assistance is to be derived from the local abstraction of blood; by cupping from the pit of the stomach; or by the application of leeches to the anus, which more directly unloads the vessels of the abdominal circulation.

The second class of causes upon which jaundice depends includes those cases in which, owing to diseased structure or vitiated secretion, some positive mechanical obstruction takes place, preventing the flow of bile from the larger ducts, and thus retaining it within the substance of the liver. In cases of this kind, we usually have a very vivid colour displayed upon the skin; which takes place either suddenly, or by slower degrees, according to the precise nature of the obstructing cause; and which continues a longer or shorter time, likewise, according to that cause; either ceasing altogether, or continuing till death takes place, at no very distant period; or passing gradually into that dingy green colour which, at first sight impresses the eye almost like the countenance of the mulatto; and, in that sense, may not unfairly deserve the appellation of Black Jaundice. Amongst these mechanical causes, the two most frequent are, undoubtedly, biliary concretions, and malignant tubera.

The presence and even the passing of biliary calculi is by no means necessarily accompanied with jaundice; for as long as the cystic duct alone is obstructed, or the hepatic or common duct only partially blocked up, the fixed yellow colour may shew itself, although slight indications of jaundice may be present, and may recur frequently, passing away with surprising rapidity, so that almost daily changes may be observed. But, on the other hand, when the common duct is blocked up, the most brilliant jaundice often takes place, and the same in the more rare cases of the calculus being lodged in the hepatic duct. This colour will occasionally be diffused most suddenly; and when this is the case, if the obstruction be not removed, a fatal result will sometimes speedily follow.

The evidences of biliary concretions, as deduced from the appearance of the jaundice, are therefore by no means determinate and certain; but the pain with which the disease is generally accompanied may be considered one, at least, of the most prominent symptoms which attend the passing of calculi, and assist in throwing light on the cause of jaundice. That pain is of two kinds,—a dull aching pain, which is constant, and an acute agonizing pain, which comes and goes in paroxysms. The severity of the pain is so extreme as to bring on a state of the greatest exhaustion, and reduce the pulse below the natural standard, both as to strength and frequency, or, still more often, to render it rapid and weak, while the hands and the whole surface are bedewed with a cold perspiration. The urine becomes

highly tinged with bile, and the stools of a pale drab colour; but this often varies in the course of the disease. Vomiting, hiccup, and a frequent catching inspiration often accompany this form of disease, and the symptoms are aggravated or diminished as the paroxysms of pain advance or recede. Another very frequent symptom is to be found in the occurrence of rigors at somewhat irregular intervals; but sometimes returning periodically, almost with the exactness of an intermittent. This form of jaundice is very apt to return from time to time, either from the successive passing of calculi which are seldom solitary, or from the ineffectual attempts made to get rid of a large calculus.

Should death occur in this form of jaundice, the cause of the biliary obstruction is generally detected without difficulty, by finding concretions in some of the various forms they assume, blocking up partially, or completely, the passages by which the bile should escape; and very frequently we have an opportunity of explaining peculiarities which have occurred in the course of the disease, by the situation occupied by the calculus. It is by no means necessary that the calculus should be large, for we occasionally find the obstruction to have been complete, though the gall-stone has been of very moderate dimensions; and occasionally the calculus has passed, leaving the duct greatly distended, but still the constiution has not been able to rally from the effects of the disease. The liver, in this form of the disease, is found considerably loaded with bile, and the bile-ducts often distended, sometimes forming pouches in which bile is collected, shewing a long-continued and frequently-returning tendency to obstruction.

The treatment of jaundice, under these circumstances, is to be directed to the removal of the temporary obstruction, and consists of such means as are likely to favour the passage of calculus. Opiates combined with purgatives, warm-bath, and assiduous fomentations, are amongst these means; but besides these, the use of mercurials and antimony are of great importance. The antimony, with a view of relaxing spasms, should be combined with the purgatives, wherever vomiting is not a very prominent and distressing symptom. The use of mercury is much more doubtful, and it ought not to be carried to any great extent; for if the obstruction be very obstinate, we run a great risk of doing mischief by over-stimulating the liver, and shall probably add to the distress under which the patient labours, both by increasing the quantity of bile secreted, when there is means of carrying it off, and likewise by increasing the irritability and diminishing the powers of the system by the action of the remedy. In these cases, then, there is no doubt that injury is not unfrequently done by the administration of mercury; but this is still more liable to be the case in those instances of jaundice from mechanical obstruction, which arise from organic deposits.

The most frequent instances of organic deposit giving rise to jaundice are those in which malignant disease establishes itself in some of the complicated parts which lie in the neighbourhood of Glisson's capsule---the small lobes of the liver, the glandular structures, the pyloric end of the stomach, the substance of the duodenum, or the pancreas.

Where any organic lesion of this kind takes place, the jaundice is generally less sudden in its appearance than in other cases, though I have known apparent exceptions to this rule,---I say apparent, because, in many cases, particularly amongst the poor, disease may have made a gradual but decided progress, without exciting attention, till the change of colour has become very observable, and then it has been supposed to have originated suddenly. It happens much more frequently that the countenance has gradually become suffused with bile, but at length the more decided jaundice has taken place, and this has gone on increasing in intensity for a time, after which the colour has lost its brilliancy, and assumed the dark dusky green hue and squalid appearance, which is one of the worst symptoms. In this form of jaundice the urine becomes loaded with bile, till it assumes a colour deeper than porter, but of a green tint; and the stools are of the lightest drab colour, approaching to white. Now, the patient becomes drowsy, ecchymosis takes place in various parts, blood escapes from different surfaces, the frame emaciates, and a state of exhaustion, succeeded frequently by coma, closes the scene.

Malignant disease may, however, exist in the liver to a very great extent, without producing any marked or de-

cided jaundice; for as long as it developes itself only near the surface, or in such parts as it does not make pressure on any large biliary duct, although slight suffusion may result, the decided jaundice will not appear: but, when the malignant growths occupy parts external to the liver, but are so situated as to press upon the hepatic or the common duct, this system shews itself in its greatest intensity.

There are other symptoms, more particularly those connected with the evacuation from the bowels, which accompany the complete retention of the bile —occurring in cases where pressure is made on the common and perhaps the pancreatic duct — to which attention ought to be directed; though, as yet, no certain indications can be drawn from them. I refer to the evacuation of fatty matter, more or less mingled with the fæces. In several cases where the obstruction has been in pancreas itself, a considerable quantity of that substance has been seen floating, and completely separated from the fæces; of which another instance, besides those I have already published, has lately occurred to me in the hospital. But in most cases of very obstinate jaundice, accompanied by complete obstruction, an unusual quantity of fat has been detected; and my friend, Mr. G. O. Rees, has kindly undertaken several analyses for me, with a view of ascertaining this fact; the result of which may, at some future time, be more fully stated.

The appearances presented by the liver, where organic mechanical obstruction has long existed, are generally those of the most marked accumulation of bile in all the ducts, behind the obstructing cause, whether they be the larger or the smaller, so that, in some cases, the whole liver assumes a deep olive-green colour, or occasionally a still more vivid shade of green; the large ducts within the liver are distended to the size of the finger; the hepatic, cystic, and common ducts are of still greater dimensions; and the gall-bladder, containing several ounces of bile, projects far beyond the margin of the liver; the fundus forming a tumor, which has been perceptible to the touch, during life.

The other appearances are those which belong to the disease producing the obstruction, and to the effects of the jaundice on different organs. Amongst the former are tubera of various characters, but generally of hard and solid consistence, or softening towards their centre; enlarged and hardened glands; or a schirrous state of the pancreas; and frequently a complete and permanent closing of the common ducts.

The treatment in these cases is necessarily little more than palliative. As long as the symptoms have not fully convinced us of the nature of the disease, we may be induced to employ mercurials cautiously; but where the disease is confirmed, mercury can be of little or no utility, and will generally be productive of very injurious consequences: it ought, therefore, to be avoided, except in the form of an occasional purgative, and whatever can allay irritation, support the tone of the stomach, and supply gentle nourishment to the system, will afford the best means of prolonging life, and diminishing the suffering of the patient. What power iodine, in any of its forms, may be capable of exerting over deposits of this kind, or how far it may be able to check the progress of their formation, is at present not sufficiently ascertained.

The third class of causes includes various chronic changes in the structure of the liver; and in these, many of the symptoms present a marked difference, when compared with those of the two foregoing classes. The colour of the skin seldom partakes either of the purple tinge which attends thoracic obstruction, or of the deep yellow, or the dingy green, which are so frequently observed in cases of mechanical closing or obliteration of the life-ducts. The change from the natural colour is usually gradual and inconstant; and the yellow tinge of the conjunctiva often precedes, for some weeks, any more decided indication. In time, however, the bronzed appearance of the forehead, or the darkened arcola of the eye, bespeak the approaching change; and a jaundice, bearing the lighter tints, from a sallow suffusion to a fainter or more decided lemon hue—still, however, liable to considerable fluctuation—establishes itself over the whole body.

The urine is usually scanty, and pretty deeply coloured with bile, frequently depositing the pink sediments in abundance. The alvine evacuations seldom present that marked deficiency of bile which in some other cases is

observable: on the contrary, they vary through the different shades of brown and yellow; and are often remarkable, rather for the unequal manner in which the bile is mingled, than for the absence of that secretion. The action of the bowels is generally irregular; and as the disease advances, evacuations of blood frequently take place. Ascites and anasarca usually follow quickly in the train of these diseases.

The more frequent cause which excites this form of jaundice is the excessive use of stimulating food and drink; inducing long-continued or frequently-repeated over-action of the liver, rarely amounting to an appreciable state of inflammation. It likewise arises as a sequel to more decided and even inflammatory attacks; and is sometimes the result of the diffused schirrus propagating itself through the organ.

The appearances presented after death vary greatly; but, as regards the liver, are all, more or less, indicative of long-continued morbid action. The liver is sometimes increased in its size; but very frequently quite the contrary, the organ having evidently undergone contraction in the progress of the disease: indeed I have, in some cases, most distinctly traced its enlargement in the beginning of the attack, and its gradual diminution towards the more-confirmed stages of disorganization. Though the larger ducts are pervious, and a certain quantity of imperfect bile is found in the gall-bladder, yet the whole substance of the liver is frequently tinged by the bile retained within its smaller ducts. A general granular appearance exists throughout the liver, as if the acini were drawn into masses, surrounded by thickened cellular membrane: and if, without being injected, a portion of liver in in this state is macerated in water for several weeks, the little granules assume the appearance of adipocire; and may be easily washed out by a stream of water, leaving a fine tissue of vessels and cellular membrane floating in the water. When the disease has gone further, the bands of cellular membrane are seen intersecting the structure, and forming more decided septa between the masses of acini. These are the more common appearances, where, from frequent over-stimulation, gradual change iu the structure of the liver has given rise to jaundice. Of some of the appearances produced by malignant deposits distributed generally throughout the organ, I shall take another opportunity of speaking.

Besides the changes in the liver, a great many others, affecting the organs of the abdomen and the peritoneum, might be mentioned; but that which is most frequent is the disease and ulceration of the lining membrane of the colon, which very generally occurs where the structure of the liver has gone into chronic degeneration; and in no case more frequently, than when the true fatty degeneration, which is seldom accompanied by jaundice, has taken place.

The treatment in this third class of jaundice is rather by the cautious adaptation of food, the avoiding of stimulus, and the long-continued employment of such medicines as restore and keep up the moderate action of the system, than by any powerful remedies. Much may be done in the early stages, if the patient will submit to regimen: but when serious effusions have taken place, and other symptoms of advanced disease have shewn themselves, little but temporary relief can be expected.

(To be continued)

MEDICO-BOTANICAL SOCIETY,

Wednesday, February 9, 1837.

Earl Stanhope in the Chair.

Dr. Ryan, the Professor of Materia Medica to the Society, delivered a lecture on the arrangement of a Pharmacopœia, and expressed the opinion that such a work ought to contain the history of medicines, their doses, uses, and classification, according to the Botanical characters, or the Physiological or Therapeutical effects. He also thought that authority of a College, was much greater than that of an individual in determining the medium doses of drugs, so far as this could be attempted. He further observed, that the preparations in the different pharmacopœias were too few, and obliged practitioners to arrange a great number of extemporaneous prescriptions. Most of the Hospitals and Dispensaries had their own pharmacopœia, as Surgical means were excluded in a great measure from the Collegiate ones.

Dr. Sigmond observed, that the object of a pharmacopœia was to guide

chemists in the preparation of certain medicines, and not to propose doses or state the uses of medicines, which were to be learned in lectures on materia medica. The different dispensatories contained the history of drugs, their uses, and doses, and the authors of these works were expounders of the pharmacopœias. He did not agree to the opinion that the pharmacopœias ought to contain extemporaneous prescriptions.

Dr. MACREIGHT agreed with Dr. Sigmond, and shewed the difficulties which the college had to encounter in framing the new Pharmacopœia. He thought that the college acted judiciously in omitting doses and uses of medicines; and as to the number of medicines, he really considered that some had been introduced whose efficacy had not as yet been sufficiently tried in this country.

Dr. RYAN replied, and contended that collegiate was preferable to individual authority, and, in his opinion, most medical practitioners would think so.

The Society then adjourned to Wednesday week.

BOTANICAL SOCIETY.

February 2d, 1837.

J. E. GRAY, F.R.S. *in the Chair.*

A paper was read from J. Freeman, Esq. on the importance and practicability of adopting a more scientific method in describing and arranging species of plants, by dividing them into different groups, according to the forms of the corolla, stem, leaves, &c. according to the method suggested by Decandolle. Mr. G. E. Dennis read a paper on the Flora of Dover, where he has found 84 genera and 120 species. The Chairman mentioned the curious fact, that the substance sold in the shops under the name of hycopodium powder was in most instances the pollen of the yew; and the effect of light and soil on plants was noticed in the Prunus Spinosa and Ononis Arvensis, the former of which, when transplanted from the hedge into the garden, soon loses its spines, and the latter is covered with thorns in gravelly soils; but in spots where the substratum is chalk, it is entirely devoid of them. The meeting then adjourned.

THE LONDON UNIVERSITY COLLEGE.

The Rev. Dr. Fellowes has presented the sum of £500 to Mr. Took, M.P. Treasurer of the London University College, the interest of which is to be appropriated in purchasing two gold medals, to be called "The Medico-Clinical Medals," to be presented annually by Dr. Elliotson, while he continues physician to the North London Hospital, for the best clinical reports of cases in that institution. The competitors must be students of the College for two years, and have attended one whole course of each of the medical classes.

WESTMINSTER MEDICAL SOCIETY.

February 4th, 1837.

WM. B. COSTELLO, Esq. *in the Chair.*

A short discussion took place respecting the verdict returned by the coroner and jury who sat upon the body of the unfortunate woman who met with her death from a fall in Chancery-lane. This discussion not tending to interest our readers, we shall devote a larger portion of our report to an important communication brought forward by the Chairman.

Mr. COSTELLO stated that he constructed an instrument five years ago for breaking stone in the bladder, in which a new principle of security was introduced. It consisted in a metallic button, which prevented the moving piece of the instrument from rising out of its proper place, thus removing all liability to an accident which occurred in the case of an eminent operator, and which was attended with fatal results. In the first case he employed the improved instrument; the button was not very well executed, and the stone upon which he had to operate was a large one, requiring a very extensive opening of the blades of the instrument to grasp it. In this movement the button which ran along the under surface of the instrument was drawn within the prostate, the inconvenience arising from which was soon felt; for the sides of the button not being sufficiently blunted, it

scared the lining membrane of the prostatic urethra. The Chairman continued, that he was aware of the mischief which the sharp sides of the button had produced, and remained in some anxiety with the gentleman, who was 73 years of age, and who had, in addition to his other complaints, an enlarged prostate. The lining membrane had been scarified by the sides of the instrument, and the patient lost from his urethra nearly four ounces of blood. After this hemorrhage, the patient was so greatly relieved of the sense of weight and fatness which he had so long experienced in the prostrate and its vicinity, that the hint thus accidentally furnished Mr. Costello determined to take advantage of, particularly as the application of leeches to the perineum were not attended with very decided benefit in similar cases.

Mr. Costello had an instrument constructed which has answered the indication, and which he has since used with the best effects. This very morning he had used in the case of a gentleman whom he had relieved of stone three years before by lithotrity. The relief in this case was very manifest by the movements of the patient after the operation. It was his intention to submit the instrument to the Society on Saturday next.

Dr. Williams begged to ask the Chairman whether the urine, in passing over the cut surface of the mucous membrane, produced any irritation or pain.

The Chairman replied in the negative.

Other gentlemen made some observations; but as we anticipate an extended discussion upon this interesting subject when Mr. Costello will bring before the Society the instrument, we refrain from further report until the next meeting of the Society on Saturday next.

ROYAL INSTITUTION.

At the last meeting, held on Friday evening, February 3, Dr. Grant, Professor of Zoology, at the London University, delivered an elaborate and instructive lecture on the glandular system in man and animal. He commenced by observing, that our bodies are truly laboratories, in which a variety of chemical (and chemico-hydraulic) processes, are continually going forward. Glands are composed of blood-vessels, nerves, and absorbents, and serve the purpose of excreting and of secreting certain fluids for the nourishment of the body. They secrete a liquor which, by lubricating our joints, renders them moveable. These organs exist in a variety of forms, simple and compound, and are distributed over all parts of the body. Their most simple form is the follicular gland; but in Zoophytes it is a small membraneous tube, terminating in a single follicle or bladder. In animalcules it forms an alimentary canal, which is covered with orifices, through which the secreted fluids are poured out; this is plainly observable by the microscope. In man, the glandular system is exceedingly complicated; the liver, one of the most important of all the organs, is composed of two principal lobes, made up of small glandules; these secrete the bile, which is deposited in its proper reservoir the gall-bladder, thence, for important purposes in the animal economy, to be poured into the alimentary canal.

In small animals these follicular glands ramify in a variety of ways, and sometimes form, as it were, a conglomerated mass; but in the higher animals they terminate in a sac. In the lobster the nutritive apparatus is complex and extremely ramified; but in the mollusca or testaceous animals, as the oyster, it is very simple. In the sepia (cuttle fish) the liver pours its secretion direct down into several small follicles. In the scorpion it is more complicated than in any other of the insect tribe, forming a conglomerated mass of follicles, in consequence of its feeding on other insects of the same class. Fishes are destitute of salivary glands, from their habits and mode of living, not requiring any excretion of saliva; the nearest to this, however, is the pancreatic gland, which, in the cod-fish and the perch, is disposed in the form of simple follicles. In the leech, the organs of nutrition and secretion are exceedingly simple, from their food consisting of fluid matter alone; but the reverse is the case in the cock-chafer, as this insect, feeding exclusively on vegetables, require a more complicated apparatus for digestion. He made some remarks on the change of colour in the blood, from the fœtus to the time the heart becomes fully formed. After remarking on the utility and importance

of the various secretions, he adverted to the recent researches of some German physiologists, who have endeavoured to prove, that the hairs which cover the head of man are glands proceeding in a ramified manner from the body, and serve to secrete and excrete certain peculiar fluids unknown to us.

The learned Professor wished to make some further observations on Reptiles and Quadrupeds, but the evening being already far advanced, he would defer it to another opportunity.

The theatre was much crowded, and among the company were several eminent physicians, who expressed their approbation of the interesting lecture. At the next meeting, Dr. Ritchie will lecture on the Velocity of Sound, and on the discrepancy existing between theory and observation.

OBSERVATIONS ON THE REDUCTION OF STRANGULATED HERNIA.

To the Editor of the Medical and Surgical Journal.

SIR,

I beg leave to say a few words on a discussion which appeared iu your last week's number, in which I observe, that the Westminster Medical Society at a late meeting, was chiefly occupied on the subject of hernia. The information, however, elicited on the subject, seems to me much less than might have been expected from the high acquirements of the gentlemen present, and I think it rather extraordinary, in such an assemblage of talent, to see the enterotomy system tolerated—for the intestine is often wounded in the operation—and that eminent surgeons should continue to perform operations so distressing and so frequently fatal, without first resorting to those means which in almost every case of strangulated hernia, will be found most happily to succeeed, and that without giving pain or peril to the patient.

It is only necessary to place the patient in a bath of warm water, or better, heated air or vapour, to open a vein and bleed to syncope, then to slit the bandage, and if requisite hold a finger on the orifice, and instantly reverse the body, suspending the patient by the legs, which is easily done by two stout assistants: on this the prolapsed intestine will, with a gurgling sound, or borborigmus, readily slide into its place, or at least, with slight application of the taxis, at the same time jolting the body, and shaking the abdomen somewhat from side to side. The suspension &c., without the bath and bleeding, will in slight cases often succeed.

Adhesions to the peritoneal sac hernia at times occur, though rarely, to prevent the return of the intestine. Still this method (by the bath aud depletion, with the perspiration and increased action of the absorbents so induced) will be the most favourable, as most effectually subduing or preventing inflammation, in which alone, the danger lies.

Owing to the relaxing effect of the climate, ruptures are extremely common in South America, and become frequently incarcerated—inflammation being often excited by exposure to cold and moisture. I have had a great number of cases under my care: I never lost one after adopting the practice here stated. There is no necessity to be in such a hurry as usual to reduce the intestine: the rational object is, to subdue inflammation, and not seek, on the contrary to augment it, by one of the most disastrous operations:—nor even by the taxis, *as commonly applied*, which ought to be abandoned, as productive of great mischief, by causing or augmenting inflammation of the intestine and peritoneum.

Should the stricture not at the instant be overcome by the above means—for we must not expect severe inflammations to be suddenly resolved—I wait continuing the use of antiphlogistics and diaphoretics, repeating the bath and bleeding if required, till the tumour may be reduced with facility, or, shall recede of itself.

Purgatives should be avoided, as causing accumulations of fæcal matter in or above the tumour: for this reason, in protracted cases, after bleeding, I give opium and ipecacuanha, to drive the secretions from the intestinal canal to the surface.

So far then as my experience goes, the essential points to be attended to for the reduction of strangulated hernia, seem to be, 1st, to take advantage of the power of gravity (by suspending the patient reversed) at the moment of general relaxation of all the muscles from actual syncope, and secondly, should the attempt fail, to continue the antiphlo-

gistic means until it can be effected with ease, or if an irreducible hernia, till the irritation and stricture be removed, and a free alvine passage re-established. In short, to treat the case as one of enteritis, or acute dysentery---the most powerful remedies for which are bleeding and vapour baths, followed by nauseating diaphoretics and opiates.

The above method by inducing syncope, has been found equally successful in divers operations, and the reduction of dislocations---even those of long standing. It precluded pain and distress, and that shock to the nervous system, which is frequently the sole cause of death in surgical operations.

I am, Sir,

Your very obedt. Servant.

JNO. HANCOCK.

London: Monday, Feb. 6, 1837.

BOOKS FOR REVIEW.

Maladies des Organs de la Voix. Premier Memoire sur la Laryngite aigue ou cynancique laryngienne. Par Bureaud Riofrey, Doctor en Medicine de la Faculté de Paris, p. 36---1837.

Paris: Crochard.
Londres: Sherwood and Co.

The American Journal of the Medical Sciences, November 1836, No. 37.

Philadelphia: Carey and Co.
London: Rich, Red-lion-square.

The American Cyclopedia of Practical Medicine and Surgery, a Digest of Medical Literature, edited by Isaac Hays, M. D. Part 10, August 1836.

Philadelphia: Carey and Co.

TO CORRESPONDENTS.

LITHOTRITIST.—We cannot be at the expense of the wooden cuts; they were *lent* to the *Gazette* by the author of the book.

Sir Benjamin Brodie has presented the first copy of his new work to Editor!
Gazette.

A Subordinate.---Sir Charles Clarke, or Dr. Davis, can give every information on the subject. We believe the cost is not so great as for an Edinburgh degree, but it can best be obtained through court influence. The German degrees cost twenty pounds, or guineas, each.

RESIGNATION OF PROFESSOR MACARTNEY IN THE DUBLIN UNIVERSITY.---The Professorship of Anatomy at *Trinity College, Dublin*, we have every reason to suspect, will be shortly vacated, which, to all lovers of science, is a subject of deep regret. A short time since Dr. Macartney's valuable anatomical museum was disposed of, and no longer adorns the ancient halls of the college.

It will be no easy matter to find his successor, and let us hope that the Fellows of Trinity College will have the sagacity, wisdom, prudence, and discrimination, to invite some of those distinguished individuals who have been disappointed in getting a chair amongst us here; or who are daily displaying their oratory in the exposition of the anatomy of the human frame, and propounding their original physiological researches to empty benches. We are happy to state, that the most influential elector of Trinity College on this occasion will be the author of the *far famed forgery* of the PAPAL BULL; so that no *private* feelings, however imperative, will sway *his* choice on this momentous occasion! It will be interesting to record the name of the new Dublin Professor of Anatomy in Trinity College.

APOSTATE.---We can state, that most of the reformers expected Mr. Lawrence would have acted as VICE President at the late meeting at Exeter Hall.

V. H.---G. J. never did nor never would lose any money for building the school. *He* can lose nothing by its failure.

Paul Pry.---The "flag of truce" may be renewed on certain terms.

"JUAN" will find his communication very acceptable to the editor of the Medical Gazette; it is too much in the homœopathic style, and too impure, for our pages.

All communications and books for review to be forwarded, carriage paid, to Dr. RYAN, 4, Charlotte-street, Bloomsbury-square, or to E. Cox. Medical Bookseller and Publisher, St. Thomas's-street, Borough.

ROYAL INSTITUTION

THE

London Medical and Surgical Journal.

No. XXV. SATURDAY, FEBRUARY 18. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. X.

Digestion.

The Four Stomachs of the Pecora.---Cells in the Camel's Stomach.---The Two Stomachs of Birds.---Intestinal Valves and Villi.---Difference between the Cystic Duct and Hepatic Duct.---A Pigeon-Livered Man.---Diseases of the Gall.---Bladder in the Horse.---Intestine like a Catherine Wheel.---Comparative length of the Ileum and Jejunum.---The Cæcum, Appendix Vermiformis, and Cloaca.---Comparative Length of the Intestinal Canal in different Animals.---Structure of the Pharynx, Œsophagus, and Stomach.---Flexors and Extensors of the Stomach.---Membranous, Muscular, and Parenchymatous Stomachs.---Secretion of Bile in the Liver----Cause of Cholera and Jaundice.---Pancreas in Osseous and Cartilaginous Fishes, Birds, and Mammalia.---Structure of the Colon.---Formation of its Cells.---Arrangement of its Longitudinal and Annular Fibres.---Difference between Digestion, Hunger, and the Taking of Food.---Mechanism of Swallowing.---True Use of the Saliva.---Not Instrumental to Digestion.---Cases of Cut Throat.---Animals which have Teeth in the Gullet.---The only Animal which takes its Food Hot.---Manner in which Serpents Feed.---A Frog partly Digested and partly Alive.---Different Theories of Swallowing.---Explanation of the Difficulty of Swallowing Liquids, and more especially Gases.---Explanation of the Ascent of the Pylorus in Digestion.---Hour-Glass Contraction of the Stomach.---Mechanism and Explanation of Rumination.---Three Stomachs of the Camel.---Different Theories of Vomiting.---Absorption of of Liquids from the Stomach.---Preparation of Rennet.---Variety of Opinions on the Gastric Juice.---The Peristaltic and Vermicular Action of the Stomach.---Mechanism of Digestion, and Time occupied in the Process.---Different Theories of Digestion.---Force of the Stomach.---Different Estimates, from Two Hundred and Sixty Thousand Pounds, to Three Ounces.---Magendie's Dogs starved by too much Nourishment.

The *pecora* have four stomachs. 1. The paunch. 2. The reticulum. 3. The omazon. 4. The obomazon. The reticulum sends the food up again into the mouth for rumination. The cells in the reticulum are most remarkable in the camel; and the function which they perform in that animal, furnishes one of the arguments which prove that thirst is not seated in the fauces. Carus regards the three first stomachs as only a complicated cardiac portion of a single stomach. The gallinaceous birds have two stomachs, of which the gizzard answers to the pylorus of a single stomach.

At the pylorus the mucous membrane again becomes cylindrical, as it was in the œsophagus, and is arranged into folds, which are at first longitudinal, and then transverse; the latter being improperly called "*valves.*" The mu-

cous coat is also furnished with *villi*, and it is said that no animal has both, except man. The *ductus communis choledocus* divides into the *cystic* duct, which has many folds and no branches, and the *hepatic* duct, which has no folds and many branches. Fishes have not a pancreas; reptiles have. Some animals have no gall-bladder; and in them the bile must be different from what it is in those which have one. The pigeon, for instance; hence we say of a man not easily put in a passion, that he has a "pigeon-liver." There is no gall-bladder in the guinea-fowl, ostrich, rat, camel, deer, dolphin, lamprey, perch, and horse; although one author sagaciously describes the diseases of the gall-bladder in the horse.

In the *rana paradoxa*, the intestines are like a Catherine-wheel. The old authors used to give a greater length to the *ileum* than is allotted to it now. It is considered to consitute three-fifths (or about eighteen feet) of the length occupied by it and the jejunum, while the *jejunum* takes up two-fifths (or about twelve feet). This proportion was proposed by Winslow, but Haller rejected the division altogether. The cœcal valve is not perfect, and as it is wanting in birds, is probably not important. The *cœcum* is wanting in many birds; and is probably not an important intestine. On the other hand, however, in the wild swan, the hare, &c., it is twice the length of the body, and is often double; I believe that no animals but man and the ourang outang, have both a *cœcum* and an *appendix vermiformis*. In fishes, the anus is placed *before* the genital organs. Some of the mammalia have a *cloaca*. The sloth and the beaver, for instance, have the rectum and urethra in one, and the *ornithorinchus paradoxus* has a proper *cloaca*.

The relative length of the intestinal canal, as compared with that of the body, is rather greater in the fœtus and in infants, than in adults. The intestinal canal is generally longer in proportion to the body in *herbivorous* than in *carnivorous* animals; the rule, however, has many exceptions. In the sloth, though herbivorous, the intestinal canal is hardly as long as the body; while in the seal, which is carnivorous, it is thirty times as long. The following are examples of various animals, distinguished into *herbivorous*, *carnivorous*, and *omnivorous*, with the length of the intestinal canal as compared with that of the body. 1. The sloth (herbivorous) *once* the length of the body. 2. The mouse, (omnivorous) *three* times. 3. The hedgehog, (herbivorous) *six* times. 4. Man, (omnivorous) *seven* times. 5. The mole, (carnivorous) *seven* times. 6. The vampyre, (herbivorous) *nine* times. 7. The bear, (carnivorous) *ten* times. 8. The horse, (herbivorous) *ten* times. 9. The porpoise, (carnivorous) *eleven* times. 10. The hog, (omnivorous) *thirteen* times. 11. The whale, (carnivorous) *fifteen* times. 12. The seal, (carnivorous) *thirty* times. 13. The ram, (herbivorous) *thirty-eight* times.

A simple stomach is a mark of advance of organization, and of consequent concentration. The *stylopharyngeus* muscle posteriorly, and the *palato-phanrygeus* anteriorly, are levators of the pharynx. Throughout the intestinal canal the internal fibres are annular, and the external longitudinal; but in the gullet almost all the fibres in the upper part are longitudinal, in the middle oblique, and in the inferior portion, transverse. In the stomach, the upper surface has stronger fibres than the under, hence, the former are analagous to *flexor* muscles, and the latter to *extensors*, and from the former being stronger than the latter, the pylorus is raised during the process of digestion. The stomach of the *carnivoræ* has a very thin muscular coat, and therefore they are generally said to have a *membranous* stomach, while the *herbivora* are said to have *muscular* or *parenchymatous* stomach.

It is in the *acini*, or pencils from rays from the arteries in the liver, at the point where they meet with rays from the veins and biliary ducts, that bile is secreted. When this part is inflamed, more bile is secreted, which is conveyed into the intestines, and causes cholera. But if inflammation takes place in the course of the biliary ducts, the mucus which is secreted in additional quantity, blocks them up and the bile not being able to pass through them, is conveyed by the veins into the general system. The liver is very large in fishes and reptiles, compensating for their imperfect respiration and in some wading and diving birds it amounts to one-tenth of the whole body. The lobes of the liver are more numerous in birds and the lower mam

malia. Domestic animals have a large liver than wild ones, owing to their making less use of their lungs.

The *osseous* fishes have no pancreas, but they have a number of little tubes, which, in cartilaginous fishes, are amalgamated into a mass, which is the first type of the pancreas. In birds, the pancreas is inclosed in a frame-work furnished by the duodenum. In quadrupeds, the pancreas consists of two portions, which in man are amalgamated into one.

The colon is thought to be puckered into cells, by having the longitudinal fibres shorter than the others; in the same way as the flounce of a gown is drawn into puckers, by a shorter piece of tape. But Magendie says that the angular and longitudinal fibres, instead of being arranged in layers, are collected into bands; and in the interstices between them are cells composed of serous and mucous layers. In the front there is a hole in the peritoneum for the discharge of the ova; after they have been dropped from the ovaria into the peritoneum.

Digestion is an *organic* function, requiring for its performance *irritability* alone; while hunger and thirst are *animal* functions, requiring *sensation;* and the supplying of food requires *voluntary motion.* The line of demarcation between the animal and organic functions, is at the pharynx. Putting the bolus of food back into the fauces with the tongue, is like putting a cup to the lips; and when it gets within the grasp of the pharyngeal constrictors, it is beyond the controul of the will. Swallowing is affected by the *passions*, but not by the *will.* The saliva is instrumental to the accuracy of taste, and the lubrication of the mouth, but not to digestion; for a man digests as well if no saliva reaches the stomach; as in cases where the throat has been cut, and the food is introduced through the wound. The lower part of the œsophagus forms alternately a pouch and a sphincter. The pain about the cardia after vomiting, probably arises from forcibly overcoming the constriction of the pharynx. The motion of the gullet in those fishes in which it is furnished with teeth, is analogous to chewing. Man is the only animal which takes its food hot. The reason why the food does not pass into the trachea, is that meat and drink are too strong a stimulus for the larynx, the entrance of which therefore contracts as the food passes it. Serpents take their food *en masse;* and Spallanzani has found some parts of a frog digested in the œsophagus of serpents, while the other parts were still kicking outside the mouth.

Food was at first thought to be swallowed, from its being *attracted* by the gullet and stomach. Afterwards the food was said to pass down the throat by its *weight.* But most quadrupeds swallow with the head *downwards. We* can swallow with the head downwards too; and in paralysis, food ought to be swallowed more easily, if it depended on its weight; but, on the contrary, it is not swallowed at all. Swallowing is not a voluntary act; as is proved by the greater difficulty experienced in swallowing *liquids*, as is seen in sore-throat and hydrophobia; and likewise by the function being performed better when the mind is unconscious about it. The reason why solids are swallowed more easily appears to be, that they are a greater stimulus to the muscles of deglutition, and therefore require less contraction. Gaseous fluids require most contraction of all; and it is almost impossible to swallow them. Soldiers sometimes attain the art of effecting it, for the purposes of malingering. A pill is difficult to be swallowed; because it offers a small stimulus, and requires great contraction to grasp it.

The ascent of the pylorus during the process of digestion, does not depend on the contraction of the longitudinal fibres of the stomach; for the former is *permanent;* while the latter *alternates* with the contraction of the transverse fibres. It is probably owing in part to the *descent* of the *cardiac* portion of the stomach, from the weight of the food received into it; but it is chiefly from the hour-glass contraction, which always takes place more or less during digestion; and which would tilt up both ends if they were free; but the *cardiac* being fixed, the *pyloric* only is tilted up.

In the young of the *pecora*, the milk goes directly into the *third* stomach. The *second* stomach (or *bonnet*) always contains much fluid. From this, in the adult, the food is sent in pellets into the mouth, and is then returned, passing by the *first* and *second* stomach, and

goes directly into the *third*, which is the proper organ of chymification. It secretes the gastric juice, or rennet, and is analagous to the cardiac portion of the stomach in the human subject. Rumination is necessary, because grass contains but little nourishment, and requires much mastication; and if the animal were required to perform this with every individual portion, before swallowing it, it must be incessantly moving. The camel, which has three stomachs, does not ruminate; but when it requires a stock, or reservoir of food, it uses only the two first. In cases of rumination in the human subject, the inferior part of the gullet probably acted as a reservoir. Eructation is a minor degree of rumination. The different apertures of the stomachs of the *ruminantia* must be provided with sphincters of different specific irritability; so that the food, in its different states, enters that alone for which it is designed.

Some think that vomiting is produced partly by the diaphragm, and partly by the abdominal muscles. The following authors maintain this opinion:—Duvernay, Van Swieten, Senac, John Hunter, Richerand, Haighton, and Magendie. The following maintain that it is performed by the stomach alone:---Lieutaud, Rostan, Haller, Portal, Maingault, and Bowden. Beclard and Legallois think it is performed by the stomach, diaphragm, and abdominal muscles in concert. In Magendie's experiments, vomiting was produced by the injection of tartar emetic into the veins, after a bladder had been substituted for the stomach; and, in another case, when the pressure of the diaphragm and abdominal muscles was removed. The stomach could not be made to vomit.

Liquids are absorbed directly from stomach without passing into the duodenum; for they disappear equally well when the pylorus is tied. Rennet is obtained by steeping the third and fourth stomachs of the calf in water. The perforations sometimes found in the stomach after death, are not thought generally to result from the action of gastric juice. They may sometimes be produced in that way; but they are generally the consequence of ulceration.

The gastric juice is said to be—1. *Always acid;* by Hunter, Viredet, Leuret and Lassaigne, Tiedeman and Gmelin. 2. *Acid* in the *herbivora*, and *alkaline* in the *carnivora;* by Dumas and Gope. 3. *Acid* in the *carnivora*, and *alkaline* in the *herbivora;* by Brugnatelli and *Carnavati*. 4. *Always neutral;* by Spallanzani. 5. The *same as the saliva;* by Montaigne. 6. *constantly changing;* by Chaussier. Assuming it to be acid, its nature has been said to be---1. *Phosphoric;* by Vauqelin. 2. *Muriatic;* by Prout and Chilsdren. 3. *Acetic;* by Leuret and Lassaigne. 4. *Butyric;* by Tiedeman and Gmelin. It belongs to the class of *perspirable* secretions; but the *follicular* secretion of the mucous follicles has probably some influence; for these mucous follicles are found to vary in different animals, according to the nature of the food on which they subsist.

The *peristaltic* action of the stomach is caused by the contraction of its *circular* fibres; and its *vermicular* action by the counteraction of its *longitudinal* fibres; the latter being designed to counteract the lengthening of the stomach, produced by the former. The food received into the stomach, forms a ball; the surface of which only is acted on by the gastric juice; and then layer after layer is removed by the circular fibres of the organ. The first layer of food is digested in about three hours. Any fresh food taken into the stomach, while digestion is going on, gets into the middle of the old. The line of demarcation between the two is very well marked; and if they be of different colours, the difference may be seen in membranous stomachs before the animals are opened. About sixteen or eighteen hours are required to digest all the food taken at a full meal. If crude aliment be presented to the pylorus, it is sent back to the cardiac portion of the stomach to be further digested; and during this contest a man is "sensible of having a stomach." This is a bad sign, and shews that the function is not in a healthy state; for digestion is a function of *organic* life.

The word "*digestion*" is derived from *digerere*, to *carry about;* for it was once thought there was no concoction, but that the food was carried in in a crude state, to the different organs of the body. Digestion has, at different times, been attributed to the following different causes. 1. Heat. 2. Attrition. 3. Putrefaction. 4. Fermentation. 5. Solution. The following different estimates have been given of the force of the stomach. 1. *Two hun*

dred and sixty thousand pounds, by Borelli. 2. *A hundred and seventeen thousand pounds*, by Fracassati. 3. *Twelve thousand nine hundred and fifty thousand pounds*, by Pitcairn. 4. *Eight ounces* by Munro. *Three ounces* by Astruc. But Spallanzani has overthrown the doctrine of *attrition*, by swallowing meat inclosed in perforated balls, and likewise giving them to a mountebank. Some substances which are harder than others, such as bone, are more easily digested than others, such as the skins of fruit, cotton, &c. The gizzard of birds has been urged as an argument that the stomach acts by attrition, but the gizzard is not instead of a *stomach*, but instead of *teeth*. It is generally said that birds have a gizzard, because the stomach of the *pecora* would be inconsistent with the lightness of their bodies; but the gizzard is *heavier* than the stomachs in question would be, and many animals, such as crocodiles and turtles, are furnished with a gizzard, although they do *not* require lightness Spallanzani found that needles and lancets given to birds were broken, without injury to the gizzard. Hunter counted two hundred pebbles in the gizzard of a turkey, and a thousand in that of a goose.

Digestion is not *spontaneous* fermentation, but it is a species of fermentation, for the food is decomposed into its elements, and then recombined into chyme, and this decomposition and recombination is all we understand by *fermentation*. We may call it the *chymous* fermentation. There is probably a *solution*, as shewn by Hunter, and other experimentalists. They put masticated food, mixed with *gastric juice*, into tubes, and exposed to warmth equal to that of the stomach. In thirty five hours the surface became changed into a pullaceous matter. No further change took place in the next two days. Food mixed with *warm water* was put into another tube, and placed in a similar temperature. It putrified in sixteen hours. Since that time, the action of the gastric juice has been questioned only by Montaigne, who thinks it is like the saliva, and quite inert in the process of digestion. If the food be decomposed into its elements, the chyme must be always the same, so that it is of little consequence what food is taken, so that it be easily digestible.

Haller, Haighton, Valsalva, and Blainville are of opinion that the fatal effects of cutting the eighth pair of nerves results from the influence which the pneumogastric nerve has upon the stomach. It was found by Wilson Phillip, Hastings, and Edwards, that the process of digestion is arrested, if the nerve be cut immediately after food is taken. If the divided extremities of the nerve be galvanized, digestion is reproduced. Every organ in the body acts on every other organ, and is acted on by them. Hence the healthy action of every other organ is necessary to that of the stomach. Every action in the body depends on irritation, and the stomach has sympathies so extensive that it suffers in the diseases of every other organ. The use of the eighth pair of nerves must be the conveyance of sympathy. Respiration is known to depend chiefly on sympathy, and the asthma produced by cutting the eighth pair of nerves is relieved by galvanism. Leuret and Lassaigne affirm, that the division of this nerve acts by palsying the cardia, in consequence of which the food, by the motion of the stomach, is forced into the œsophagus. But if we consider the extensive distribution of the nerve, it is not probable that the division of it palsies only *one part*. Probably it paralyzes *every* part of the stomach, and puts an end to all motion and secretion. Holland says that cutting the nerve kills, by constricting the *rima glottidis*. But if so, the animal would die at once, which is not the case.

Spallanzani shewed that the *herbivora* may be made to live on *flesh*, and the *carnivora* on *vegetable* food. Digestion, therefore, cannot be very different in the two. Some of the salts in the earth, probably, stimulate the roots of plants, and are to them what condiments are to animals. Magendie shewed that an animal may be starved by too *nutritious* a diet; for if one kind of food only be used, the stomach ceases to feel it as a stimulus. The dogs which Magendie subjected to these experiments died of *scurvy*, therefore it was not from want of nitrogen, for the same disease is caused by salt meat, which is too *highly* azotized.

ERRATA.

At page 713, line 14 from bottom, for "*the*," read "*this*." At line 9, for "*dour oane*," read "*sour cane*." Page 714, line 19 from top, for "*external*," read "*internal*."

AN ESSAY ON DIABETES.

BY W. A. P.

Diabetes is an excessive secretion of urine. Cullen places it in class 2. Neuroses, orders, spasms. Dr. Good in class 6. Diseases of excreting functions. Order 2. Affecting internal surface.

We shall define diabetes to be *a chronic excess* of urine of a sweet smell, somewhat resembling violets, sweet whey, or milk, and a *saccharine taste*, accompanied with great thirst, dryness of the skin, voracious appetite, and cachectic emaciation. Some authors have described two forms of this disease, the one of which has been called *diabetes insipidus*, where the urine is natural in quality, but not in quantity, for we may have a temporary excess of urine in many diseases, as in *asthma*, *hysteria*, and *dyspepsia*; also from fright, anxiety, and joy, from cold, as in cold weather, after the cold bath, and when a person leaves off some of his clothes. This form is more common in women than in men, and is occasionally followed by the species in which sugar is secreted, but may exist alone; to this form the term *polyuria*, has been applied. The other form of this disease is called *diabetes mellitus*, where the urine is generally sweet to the taste, contains more or less sugar, though sometimes in so minute a degree as almost to escape detection, and is commonly increased in quantity, but not always.

M. Renauldin and Drs. Prout and Parr have proposed to limit the term diabetes to the saccharine form. Dr. Prout contends that a careful analysis of the urine in every genuine case of diabetes, will detect more or less saccharine water, even when the sensible properties of this fluid fail to point out the least saccharine impregnation. Dr. Watt has observed, that sugar may be present, but so covered with other substances, as not to be at all detected by the taste. *Dr. Elliotson* also thinks that it would be as well to restrict the term *diabetes* to the *saccharine form*, and *polyuria* to the form *in which sugar is not secreted*, that is to a *simple chronic excess* of urine. Dr. J. Bardsley objects to this, as there are several instances on record of patients dying under all the symptoms of diabetes, yet without the slightest indication of sugar in the urine, and thinks that we cannot fairly dispose of these by assuming its presence in a latent state, for in the most incidental cases of hysterical enuresis it may be latent, and then how could Drs. Prout and M. Renauldin refuse the name of diabetes to this fortuitous symptom; for the analysis of the vegetable oxides, particularly when they are intermingled with other oxides, is very imperfect, and the most delicate analysis seems not to consist in demonstrating the presence of these oxides, but in generating new bodies, which are supposed to result from the re-union of the primary elements into which the former had been supposed to be reduced by the operation. He says, that a definition should not be formed from one symptom, but from the aggregate and concatenation of the leading symptoms, and of these the immoderate secretion of urine, and cachectic emaciation seem much more characteristic than sweetness, however general, and which at times must be allowed, is undistinguishable. But as it is much easier to reduce the urine to its usual quantity, than to its natural quality, as the excess is not invariably present, and as that excess is rather to be considered as an effect than a cause of this disease, conformable with the views of Drs. Prout, Parr, &c. &c., we shall limit the term to diabetes to the saccharine form, and to this our essay will be confined.

Symptoms. The urine in this disease is clear white, straw colour, or greenish, sweet to the taste, and of a violet odour. or resembling sweet whey or milk; its specific gravity varies from 1,022 to 1,052, and occasionally it is much higher than this. The urine is generally increased in quantity, and some writers have recorded cases in which from 25, 30, and 35 pints have been voided for weeks, and even months, during the short period of 24 hours. Dr. J. Bardsley has proved that the quantity of urine voided is in some cases double the whole quantity of the ingesta; this has led to the supposition that moisture is absorbed from the air, either by the respiratory organs, or through the cutaneous surface, or through both, and this may in some measure account for the exasperation of the disease in moist weather. Modern physiologists have shown that moisture may be absorbed by the lungs, although the skin may be incapable of doing so.

The quantity of the urine is, however, generally less than the ingesta. There is also a frequent desire to make water, pain in the course of the ureters, some pain and uneasiness in the meatus urinarius of of the female, and at the orifice of the urethra in the male, frequently with phymosis, and loss of virility, pain and weakness in the region of the kidneys, and a sense of coldness in the loins. There is heat or pain, and a sense of weight in the epigastrium, particularly after meals, the contents of the stomach being not unfrequently discharged in an acid and undigested state. The bowels are costive and irregular, and the appetite is usually greater than in health. The mouth is dry, parched, and clammy, the gums are spongy and mostly ulcerated about the roots of the teeth, the saliva becomes white and frothy, the taste becomes disagreeable and depraved, and there is insatiable thirst; the tongue is white and foul, and sometimes unnaturally clean and red, the breath exhales a hay-like smell, which was first noticed by Dr. Latham; the breathing may be short, sometimes there is dyspnœa from the slightest exertion, a teasing and tickling cough, flying pains in the chest, and mucopurulent expectoration; skin is rough, dry, and inperspirable; there is a chilly state of the body with alternate flushings and burning in the palms of the hands and soles of the feet, more or less tendency to œdema of the legs and ankles; aversion to and weariness on the slightest exertion; vision indistinct, eyes muddy and painful; hearing impaired, occasional headache and vertigo; spirits much depressed; mind peevish and irritable, anxious and forgetful; pulse is variable, commonly frequent at first, in the latter stages weak and irregular, or sharp and quick; there is generally cachectic emaciation, and frequent sighing; the great emaciation has given rise to the supposition of the colliquation of the solids. The greater part of these symptoms are always present in every well marked case of diabetes. Before death there is usually a diminution and sometimes a disappearance of sugar.

Morbid appearances. In some instances *the kidneys* have been found in a loose flabby state, and more lacerable than natural, approaching a good deal to what appears in inflammation, and containing in their infundibula a quantity of whitish fluid, somewhat resembling pus, but without any signs of ulceration; at the same time as these appearances have been observed in the interior, the veins on the surface will be found to be much fuller of blood than usual, forming a most beautiful net work of vessels, the larger branches of which exhibit an absorbent appearance. Dr. J. Bardsley detected in three instances, the granulated and mottled appearance of the kidneys, so well described by Dr. Bright, as occurring in dropsical cases, accompanied with albuminous urine; the cortical part had lost all appearance of its natural structure, and presented a tolerable uniform yellowish colour, with many yellowish grey spots.

In rarer cases, one or both kidneys have been found smaller than natural. Occasionally hydatids have been found filling them and distending them enormously. A few cases are recorded, in which the structure of the kidney was hard and gristley. Some have found calculi in the pelvis of the kidney. It is sometimes found ulcerated. The nerves are frequently found enlarged to three or four times their natural size. *Dilatation* of the pelvis of *the kidney*, the *ureters*, and *bladder*, is often met with. The bladder has been found thickened and contracted, slightly inflamed, and sometimes containing a considerable quantity of muddy urine. The *prostate gland* has also been found much enlarged. The urinary organs are frequently met with in a natural state, and some affirm that they are not more frequently in a morbid state than any other of the abdominal viscera.

The *mesenteric glands* are very frequently diseased; they have been enlarged, obstructed, indurated, and softened, and Dr. Baillie found them containing a considerable quantity of earthy matter.

The *absorbent glands* have generally been observed more vascular, enlarged, and softened, and the thoracic duct, in a few instances, has been found greatly enlarged and dilated. *The lungs* have been seen tuberculated, excavated, hepatized, and adherent to the thorax. Drs. Copland and J. Bardsley state that they never saw a case in which the lungs were perfectly healthy. Dr. Elliotson states, that frequently no morbid sign is found in the body. M. Luzotte observed aneurism of the pulmonary ar-

tery, the kidneys being sound. *The liver* has been found by some natural, by others large, and of a firmer consistence than natural. The digestive mucous surface has been observed more vascular than usual; sometimes it is rugous. *The stomach* and *duodenum* are sometimes dilated.

M. Dupuytren found, in addition to dilatation of the stomach, a considerable quantity of inflammable air, and a small quantity of a greyish liquid, in which were floating seven or eight small yellowish round fatty substances. These conditions of the *liver* and *digestive canal* are considered by some as merely accidental. The *spleen* and *pancreas* have seldom presented any lesion.

The heart has been found flaccid, small, and soft; the blood dark and semi-fluid. Some have detected chyle imperfectly mixed with the blood, in the large vessels and cavity of the heart. Marshall remarked a chocolate appearance of the blood in all the vessels.

Upon the whole, post mortem researches have thrown but little light on the nature of diabetes, further than shewing that it is the result of a morbid condition of several, if not all of the assimilating and excreting viscera. Organic changes are by no means constantly observed after diabetes, even in the urinary organs, and when present are not such as to account for the origin of the disease. There is no doubt but that there is a degree of excitement in the kidneys, which is rather the effect of the disease than the cause. We may justly say, we are ignorant of the *essential pathology* of this disease.

Diagnosis.—The diagnosis of this disease is generally easily formed, from the sensible properties of the urine and other symptoms. It is a disease which may be easily overlooked, even by an experienced physician. When we see a patient emaciated, complaining of thirst, with a good appetite, and a dry skin, and you can perceive no cause for these symptoms, either in the chest or abdomen, it is always well to inquire into the state of the urine.

Prognosis.—It has been proved, that a saccharine condition of the urine may exist for several years, without the powers of the stomach being much impaired, or the general health much affected, and there is little doubt but that a saccharine state of the urine is a much more common occurrence than is generally supposed. Many diabetic patients, whose manner of living has been temperate, have been known to reach advanced age. In those whose constitutions are injured by long and frequent excesses, the disease in a short time proves fatal. Dupuytren and Thenard have known it continue, with intervals of improvement, for many years. When it proves fatal, it commonly runs its course in a few months, and is seldom of shorter duration than several weeks. It is always worst in cold and moist weather. Frank states that it is most severe in autumn. Many cases which are believed, or stated to be cured, have only experienced a temporary benefit. The chances against the patient may be estimated at nine or ten, or even higher than this. The disease may appear cured, but the slightest exposure or inattention will bring on a return. If unchanged by treatment, the debility increases, the pulmonic symptoms, with hectic, supervene, and the patient dies with all the symptoms of phthisis, or it may end in incurable dropsy, or apoplexy. The discharge generally becomes a little more urinous before death. Dr. Prout has observed it terminate in a peculiar affection of the stomach, occasioned by improper food, or by an over distension of this viscus, from the excessive quantity of solid and fluid ingesta. The prognosis should always be guarded, more particularly when the disease is complicated with any organic affection.

Predisposing and exciting causes.—Diabetes is often hereditary. A scrofulous diathesis is said to predispose to it. Constitutional weakness, and the decline of life predispose to it, for it is more common after the period of puberty, though childhood is not exempt from it, for several cases of infantile diabetes are on record. It is more common in cold and moist climates than in warm and dry, and particularly where the inhabitants are imperfectly nourished, and live on rye or vegetable food, Preceding diseases, as hysteria, dyspepsia, asthma, and hypochondriasis predispose to it.

Dr. Elliotson says that it occurs most frequently in bakers, and Dr. J. Bardsley observed the disease most in those artisans, whose occupation exposed them to sudden changes of temperature. Those who live in low damp situations,

and where very slight exertion brings on profuse perspiration. Those who are accustomed to drink profusely of cold fluid, and eat immoderately of acid fruits, are very liable to it.

Dr. J. Bardsley has seen twelve cases attributed to this cause. Some trace it to sleeping out all night in the open air, in an intoxicated state. The depressing passions, abuse of spirituous liquors, and immoderate evacuations, are exciting causes of this disease. Strains of the loins, chronic abscesses, and carbuncles, and whatever induces debility of the system in general, or of the chylopoietic viscera in particular, may excite this disease.

The history and various theories of the proximate cause.—This disease was known to most of the earliest writers on medicine. If it was known to Hippocrates, he has not mentioned it; but Celsus, Aretæus, Galen, Aretius, Oribasius, Alexander Trallianus, Paulus Ægineta, Avicennua, Alsaparavius, and many others have left an account of this disease behind them.

Celsus, who wrote between the years 13 and 55, A.D., says,—"When the urine flowing forth beyond the quantity of drink, and now without pain makes emaciation and danger: it is thin, there is need of exercise and friction, and particularly in the sun, or at the fire. Bathing ought to be seldom, nor should there be long delay in the bath: astringent food: rough wine pure and cold through summer, lukewarm through winter; but the least possible. Also the lowest belly is to be clystered or purged with milk. If the urine is thick both exercise and friction ought to be more violent; and the delay in the bath longer: there is need of tender food: the wine the same. In each disease all things are to be avoided which promote urine." (Lib. 4, ch. 20.)

Aretæus, who flourished between the years 54 and 81, well remarks that diabetes is a wonderful affection, being a melting down of flesh into urine, occasioned by a cold and tumid cause like dropsy. The disease, he says, is of slow formation; but when completely formed speedily proves fatal. He describes the symptoms to be fiery thirst, a never ending desire to make water, a parched skin, and so forth. He considers it a species of dropsy, the water in one case being determined to the peritoneum, and in the other to the urinary organs. He says that "the patient never ceases voiding his water: but as from the openings of the water ducts, the stream is perpetual. He recommends by all means to pay attention to the thirst, endeavouring to allay it by means of the medicines called adipsa; to rectify the stomach by purging with hiera; and to apply epithemes of spikenard, mastick, and the like. For drink he directs water in which autumnal fruits have been boiled; and for food recommends starch, milk, and cold astringent wines. He concludes by saying that the general remedies and regimen proper in dropsical cases will answer in diabetes, and particularly mentions the theriac and mithradate.

Galen, who lived between the years 131 and 2, states, that he only recollected having met with two cases of diabetes. He mentions that it is such an affection of the urinary organs as lientary is of the bowels. He was of opinion that the kidneys are primarily affected, and not the stomach, as some had supposed. *Galen's* theory was that diabetes is a *hot intemperament of the kidneys*, whereby the *attractive faculty* of the kidneys was *increased in strength*, and the *retentive diminished*, (De locis aff. Lb. 6. ch. 3.)

Ætius, at the beginning of the sixth century, gave the fullest account of diabetes on the authority of Archagines He recommends at the beginning *bleeding* and *diuretics*; the latter being given to clear away the vitiated urine from the kidneys; but if the disease is of long standing, he prescribes both these measures. He recommends cooling diets, ruddy wine diluted, cooling applications to the pubes, and loins, and in certain cases narcotics, such as opium and mandragora. (Tetrab. iij, Serm. iij Ch. 1.) *Paulus Ægineta, and Alexander Trallianus*, wrote in the 6th century. These, together with Ætius, followed Galen's theory, and merely borrowed from him. Paulus Ægineta recommends abstinence from all *diuretics*, *bleeding*, food difficult of digestion, and strong wines. Alexander Trallianus does *not* mention bleeding. *Avicennua and Alsaharavius* speak favourably of bleeding; and in modern times have found a strenuous abettor in *Dr. Watt*, of Glasgow. No further improvement was made until the time of our countryman, *Dr. Willis*, who, in

1659, advanced a new theory, and pointed out the presence of sugar in diabetic wine. *Dr. Willis* says, "Diabetes is rather an immediate affection of the blood than of the kidneys, and thence derives its origin; for the mass of blood becomes, so to speak, melted down, and is too copiously dissolved into a state of serosity, which is sufficiently manifest from the prodigious increase of the quantity of the urine, which cannot arise from any other cause than from this solution and waste of blood." *Sydenham*, the contemporary of *Willis*, and who lived several years after him, does not mention the sweetness of diabetes wine, although he has adopted the same hypothesis as Willis. *Dr. Latham* also, of later date, contends that the sugar, with respect to its elements, may exist in the blood, though the substance itself be not discoverable in it, being "so weakly oxyginated as to be again readily evolved by the secretory action of the kidneys, not from any fault in the kidneys themselves, but from the natural and regular exercise of their function, in separating from the imperfect blood such matters as are imperfectly combined with it." The presence of sugar in the blood of diabetic patients had been demonstrated by *Mr. Maitland*, in a paper published in the *Medical Gazette for March* 5, 1836, which, in a measure, confirms the opinion of Dr. Latham, and holds for the theory, which has received the name of *Rollo*, having been first noticed by Galen, viz. "that the kidneys were primarily affected, not the stomach, as some had supposed." *Dr. C. Darwin* brought forward another hypothesis, which never had any support except from his father, he supposed that "a saccharine and imperfectly elaborated chyle instead of being conveyed into the blood, is carried to the kidneys and bladder by a retrograde motion of the absorbents, which are connected to the lacteals by many anastomoses, and that thus the urine is necessarily sweet, and the colour of whey." If this was true, how could sugar be detected in the blood, and why should we assume the existence of a new channel of communication from the stomach to the kidneys and bladder, when a direct communication is fully established by the very fact, that sugar exists in the blood of diabetic patients? It is this fact which upholds the theory first advanced by Dr. Mead, assumed by Drs. Cullen and Dobson, and after them by Dr. Rollo, viz. "that diabetes consists in a morbid action of the stomach and chylopoietic viscera." Dr. Rollo fixed the seat of the disease in the stomach, and conceived that it consisted "in an increased secretion and action, with a vitiation of the gastric juice, and probably too active a state of the lacteal absorbents, while the kidneys and other parts of the system, as the head, skin, &c., are only affected secondarily."

Drs. Woollaston, Marcet, Henry, Bostock, Prout and *Bardsley*, failed in their experiments to determine the existence of sugar in the blood of diabetic patients. This has long been considered the weak point in *Rollo's* theory; however we need not now, in order to account for the presence of sugar in diabetic urine, suppose a power in the kidneys of forming this new product by secretion, nor need we assume the existence of a new channel of conveyance between the stomach and kidneys, for a direct communication is established by the presence of sugar in the blood. I think we may now fairly admit that sugar is formed by a process of imperfect assimilation in the stomach. The presence of sugar in the blood of diabetic patients may account for its not putrefying as soon as healthy blood. *Camerarius* conceiving that diabetes is a disease seated in the kidneys, ascribed it to spasm, in which he was followed by Cullen, who afterwards abandoned it for the hypothesis of *Mead*. *Dr. Wollaston* ascribes diabetes to a change in the animal electricity of the kidneys. *Drs. Clark* and *Marsh* impute the disease to the cutaneous surface, and consider it "as a sweat driven in upon the kidneys, where this morbid determination keeps up a profuse discharge." Frank conceived that diabetes is a disease of the lymphatic system conjoined with excitement of the urinary organs, he says, that it proceeds from stimulation of both these by same virus formed within, or introduced from without, and producing a reverse effect to that occasioned by the virus of rabies canina, so that whilst *the latter* produces a dread of liquids, *the former* excites a a constant desire for them. In support of this doctrine, he advances the opinion of the ancients, that diabetes is occasioned by the virus of a serpent, called dipsas, and hence, the common

name given to this malady by them, "dipsacus."

Dr. Latham mentions a case of diabetes which was produced by the bite of a rat, and therefore it is probable that it may be produced by the bite of reptiles or even higher animals. Dr. Copland concludes, from what he has seen and thought respecting this disease, "that, owing, to deficient or exhausted influence of the nerves supplying the *assimilating viscera* and *vascular system*, the chyle is not *readily* or *perfectly changed into blood*, nor are the nutritious parts of the blood attracted by, and identified with, the various structures; that this imperfect performance of the assimilating functions must necessarily be attended by deficiency of all the secretions and excretions *except the urinary*, particularly the *pulmonary*, the *intestinal*, and the *hepatic*, as both classes of functions are under the influence of the organic system of nerves;" and thus "the more watery parts of the blood are carried off by the kidneys, instead of being secreted from the cutaneous, the respiratory, and intestinal surfaces; and the action of the kidneys being once excited, becomes excessive from the superabundance of the imperfectly elaborated and stimulating matters contained in the blood circulating through them. That a morbid state of the organic nervous influence throughout the tissues, and of the blood, exists in this disease, is shewn by its chief phenomena, and by the fact that diffusive inflammation followed bleeding in two cases under the care of Dr. Duncan.

Sensible Properties and Chemical Analysis of Diabetic Blood.

Dr. Prout made a *comparative examination* of the blood of persons labouring under diabetes *with healthy blood*, chiefly with a view to determine whether the quantity of azote was the same in each. The diabetic blood presented the usual appearances of healthy blood, and from his experiments we may infer that diabetic and healthy blood contain the same quantity of azote. MM. Henry and Soubeiran found the quantity of its fibrine and albumen one-fourth less than is assigned to healthy blood by Berzelius and Darcet.

Nicholas and *Guendeville* consider it less animalized, and to contain a smaller quantity of fibrine, than healthy blood. Dr. J. L. Bardsley carefully analysed the blood of several diabetic patients, but could never detect any marked difference in its chemical composition from healthy blood. Dr. Watt asserts that the blood in diabetes has sometimes an unnatural appearance, being a little like treacle, and of a bluish colour, not putrifying as soon as healthy blood. *Wollaston*, *Marcet*, *Henry*, and others, have performed a number of experiments in order to detect the presence of *sugar* in diabetic blood, but as they failed, it is not necessary to do more than thus briefly notice them. We have extracted the following from Mr. Maitland's paper. A patient in St. George's hospital passed twenty-four pints in the day, four ounces of this urine was slowly evaporated to dryness, and yielded, after being purified by alcohol, two drachms of whitish sugar in the form of granular masses, into which it broke spontaneously. As four ounces yielded two drachms so twenty-four pints would yield two pounds of sugar (avoirdupois) in twenty-four hours. "Some weeks after, when the urine had diminished to about sixteen pints, eight ounces of blood were drawn from the patient's arm towards the evening. It yielded about five ounces of opaque serum of a milky appearance, which was treated as following:—On gently heating it, a quantity of *albumen* was deposited; the liquid assumed a dark colour, and on being poured off and evaporated to dryness, left an abundant semi-transparent residue. On digesting the masss in hot alcohol, a solution was obtained, of a very pale straw-colour, we by spontaneous evaporation, produced crystals of carbonate of soda and chloride of sodium. A thick syrup was left, which, upon being drained off upon a watch-glass, and evaporated to dryness, became a light brown transparent mass, which being somewhat charred smelt strongly of burnt sugar. Its taste, though not purely saccharine, was nevertheless decidedly sweet, and could be exactly imitated by a mixture of salt and sugar. In its appearance deliquescence and general properties, it perfectly resembled a former specimen prepared from the urine, which was also charred. The dryness produced by its deliquescence, on being mixed with sulphuric acid, was instantly blackened and small carbonaceous flakes were deposited. The whole quantity obtained from four ounces of

blood was four grains, and it would therefore require seven and a half pounds of blood to furnish a drachm.

Sugar has also been detected in the blood by Signor Felice Ambriosione, of Milan, the following is the analysis of blood:—

One pound of serum and crassamentum were diluted with water, boiled and filtered. The filtered liquor was deprived of its colour by subacetate of lead, and a stream of sulphuretted hydrogen threw down from the mixture a black pultaceous mass, which, diluted by distilled water and filtered, produced a dark brown liquor, which was boiled in a solution of albumen. As the albumen coagulated the liquor, separated into a clear colourless fluid, and a dark flocculent insoluble matter. The fluid portion, when boiled slowly, threw up a syrupy scum, and assumed all the characters of a perfect syrup.

Left at rest for a few weeks, small colourless crystals were formed in it of a prismatic form, with a rhomboidal base, modified at the angles and apices, in every respect resembling a perfect sugar. The uncrystallized syrup at about 80 Fahr. mixed with a little yeast, exhibited a decided vinous fermentation. The quantity of syrup obtained from one pound of blood was about an ounce, the crystals weighed two grains. The patient was cured by creosote.

SENSIBLE PROPERTIES AND CHEMICAL ANALYSIS OF DIABETIC URINE.

M. Mialhe pointed out the fact that diabetic urine contains gases; this took place at the hospital St. Antoine, in 1834.

Dr. Clanny, on making some experiments on diabetic urine, found, that by means of his air-pump, he was able to extract some gases, none of which could be obtained from healthy urine, the following are the result of his experiments taken from the Lancet, January 9, 1836.

Ten ounces of diabetic urine were found to contain the following gases:—

	Cubic Inches.
Oxygen	·06
Carbonic acid gas	.02
Nitrogen gas	·19
1st Experiment	·27

	Cubic Inches.
Oxygen	·03
Carbonic acid gas	·02
Nitrogen gas	·26
2nd Experiment	·34

Several distinguished chemists since the time of Dr. Willis, have analysed diabetic urine with a view of determining the precise nature of that morbid secretion. The saccharine impregnation has been found to vary at different intervals in twenty-four hours: its sweetness not being always discoverable to the taste. Sugar obtained from diabetic urine is similar to that obtained from grasses. The urine, when first voided, is of a pale straw colour and clear, but often deposits a white flaky precipitate. It has a violet odour, which in the course of a short time becomes sourish: the usual changes having taken place, which sugar is capable of producing, namely, the vinous and acetous fomentation.

Dr. J. L. Bardsley says, that there is no marked difference in the temperature of diabetic and healthy urine as some have asserted.

Dr. Henry has shewn, that the specific gravity of *diabetic urine* is greater than natural, and has given a very useful table, shewing the quantity of solid extract in a wine pint of urine, from 1·020 to 1·050. In ten cases of diabetic urine, the sp. gr. never fell short of 1·020 to 1·050, and is sometimes even higher than this Dr. Prout invented a urinometer for measuring the sp. gravity.

The sp. gravity varies according to the violence and severity of the disease, especially when the patient is not confined to any rules of diet.

In a patient under Dr. J. L. Bardsley, the *sp. gr.* was reduced in the course of two days from 1·033 to 1·022, and very shortly afterwards it reached 1·043.

Dr. Prout has shewn that an excess of urea often precedes the appearance of saccharine matter, and that as the saccharine matter diminishes the urea generally increases.

Several eminent chemists have stated that there is no urea in diabetic urine, amongst these are *Dalton*, *Bostock*, and *Fourcroy*. Drs. *Prout* and *Henry* mention that though the urea is *much dimi-*

nished, it is *never absent*. Mr. *Kane*, of Dublin, has made some experiments on this subject, from which he concludes, *that urea is voided* by diabetic patients *(per diem) in the same quantity* as by healthy individuals.

His method of detection was by plunging a mixture of the fluid with nitric acid into a freezing mixture, made with ice and common salt. At this temperature a crystallization of urea took place.

Urea .	52·63
Nitric Acid .	47·37
	100·00 Nitrate of urea.

The different salts in diabetic urine are nearly the same as in healthy as to their proportion to one another: they are said, however, to amount to only one third of their absolute quantity, which is accounted for by their greater dilution.

Sometimes small portions of blood, and occasionally a white milky fluid resembling chyle, has been found in it.

The great difficulty in obtaining urea from urine is from the sugar, with which it is mixed, completely preventing the crystallization *on the addition* of *nitric acid*.

Dr. Henry has proved, that when the solid extract contains less than one twentieth of urea it cannot be made apparent by nitric acid.

To obtain sugar from diabetic urine, *add subacetate* of lead, which throws down the animal matter; filter the urine and throw down the excess of lead by sulphuretted hydrogen. It must then be evaporated to the consistence of a syrup, and the sugar crystallizes.

Concentrated sulphuric acid changes sugar to a black substance, which is carbon.

If a small quantity of sugar, albumen, or oil be mixed: the addition of the smallest quantity of concentrated acid produces a beautiful crimson.

Nitric acid converts sugar into oxalic acid.

Treatment.—The treatment of this disease by the ancients was unsatisfactory, and we cannot wonder at it, when we consider that they were ignorant of any morbid change as to its qualities, regarding only the unnatural quality of the urine.

The means employed by modern physicians have been various, and many of these remedies have been used empirically; and with so defective a pathology we cannot wonder at the treatment not being altogether rational. Almost every plan has been tried, and at present we must confess that it is not always under our control, and as the disease exists in different constitutions, so we must expect that it will require different treatment. The great indication seems to be, to destroy that condition of the stomach and chylopoietic viscera, which permits the formation of sugar, to improve the condition of the blood, and to allay the excessive action of the kidneys. To fulfil which the following means may be used.

Astringents were first given in this disease by Celsus, he trusted to rough wine and constipating diet. Almost every author since his time, contains considerable notice of their efficacy, and they are still had recourse to by a great number of practitioners. They are said by some to be contra-indicated on account of their producing constipation, and some doubt whether alumen, and the vitriols, or any astringent which ultimately stimulates, can be used in safety in diabetes.

Astringents act by constricting the vessels which are in a state of relaxation, and through which the urine filters into the papillæ of the kidney, but they may also act by an inherent sedative power on which their peculiar virtues seem almost entirely to depend. They may diminish the quantity of the urine, but seldom if ever its saccharine quality.

The Greek physicians, and our countryman, Willis, gave astringents, agglutinants, and diet easy of digestion, consisting of animal and vegetable food, with a view to invigorate the debilitated organs, and give firmness and coagulability to the blood.

Sydenham praised pomegranate bark, and speaks particularly of astringents when combined with aromatics and opiates.

Many doubt the efficacy of astringents; the chief astringents are dec. of oak bark, inf. of kino, sumach, catechu, uva ursi, diosma crenata and lime water.

Willis and *Watt* praised lime water alone, or with milk.

Dr. Graham directed sulphate of zinc to the kidney by means of turpentine combined with it in the form of a pill.

Sulphuric acid and its *salts* have received the sanction of many writers, who have generally combined them with cinchona, opium, and aromatics; the chief of these are the sulphates of iron, zinc, alumen, potash and quinine.

Dr. Frazer mentions a case, in which the urine lost its saccharine taste in a month after the commencement ferri sulphas and animal food.

Tonics and astringents combined, have received the sanction of some writers, as cinchona and uva ursi of each ℈i. increased to ℥ss. opium gr. ss. ter vel quater in die, and lime water for common drink; this was extolled by Dr. Ferrier, who has recorded five successful cases of cure by this treatment.

Cinchona and *the mineral* acids, have been combined.

Dr. Elliotson speaks very favourably of carbonate of iron.

Dr. Venables recommended the phosphate of iron, and *Dr. Latham* placed much confidence in phosphoric acid and its salts, because he supposed that there was an evident deficiency in the supply of the phosphate of lime to the body; but this deficiency in the supply of phosphate of lime might arise from an excess of phosphoric acid rendering the insoluble phosphate a *super-phospate, which* is very soluble, and in this case lime would be the proper remedy instead of phosphorus and its salts.

Many other remedies have also been employed, as ammonia, calcined magnesia, tincture of cantharides, and iodine.

In No. 620 of the "Lancet" is a case of diabetes, reported to be cured by creosote. There is a paper on this subject in the Medico-Chirurgical Review for April, 1836, which comes to the conclusion that it will not cure diabetes. Dr. Elliotson has tried it, and is of the same opinion.

Nitric acid drink (℥i to Oj of distilled water), or the nitro-muriatic acid (nitric acid ℈ij, muriatic ℈i, distilled water Oj): these have been given internally, and used externally, in the form of lotion, to the loins, and over the epigastrium, as recommended by Dr. Scott.

These may be combined with opium, or used in conjunction with mercurial inunction. An occasional dose of calomel, combined with rhubarb, and followed in the morning by a brisk purge, will also be found useful, especially when there is biliary derangement.

Nitric acid drink is said to mitigate the thirst and heat, and diminish the quantity of the urinary secretion. It is contra-indicated when it produces diarrhœa, and in this case lime and soda water will be found good substitutes.

Dr. Baillie extolled the Bristol waters, and Dr. Marsh the Leamington.

The bowels should always be kept regular for this purpose. Baglivi recommended *rhubarb* and aromatics.

Dr. Ballie prescribed *it* with laudanum.

Some praise *castor oil* for this purpose; others combine *aperients* and *tonics* as *inf gentian*, and sennæ with phosphate of soda. Dr. Rollo used *hepatized ammonia*, with a view of furnishing to the system the elements which seemed wanting to the chyle, and in the urinary secretion. This he exhibited in connexion with animal food, and occasionally interposed emetics and narcotics.

Sulphur and the alkaline sulphurets have been given, so as to produce a purgative effect; and Harrowgate water has been praised by some.

Emetics have been employed with advantage, in early stages, where vigour remains.

Some of the *continental physicians* recommend *myrrh*, *assafœtida*, and *valerian*.

Segalas has tried urea, but it had the effect of increasing the mellitic urine.

Hufeland, and some of the *German physicians*, have given ox-gall in as large doses as the stomach would bear. During its use the saccharine state of the urine diminished, but generally returned after it was discontinued.

Venesection was used as far back as the time of Artæus. Dr. Watt recommended repeated and copious bleeding, with a view to arrest the inflammatory determination to the kidneys. Dr. Watt was first lead to the employment of bleeding from the circumstance that a patient of his expectorated blood, and from his having in mind the case of Captain Meredith (as recorded by Dr. Rollo), who, on the evening of the bloodletting, felt lighter, cooler, more cheerful, and had less pain about the kidneys.

Dr. Satterley adopted this practice with manifest advantage, whilst it failed with some.

Drs. Prout, Hufeland, Marsh, and

J. L. Bardsly consider it beneficial only in the early and acute stages of this disease, where there is plethora, or where the strength is not much reduced, and the pulse remains of good strength and volume.

Dr. J. L. Bardsley recommeuds it where there is a pulmonary irritation and difficulty of breathing, slight cough, and pains in the chest. Pain in the loins may be considered as an additional proof for bleeding.

When general bleeding cannot be employed, cupping and leeches may be of manifest advantage. Cupping is useful when it is an object to determine the quantity of blood. Sir D. Barry particularly recommended cupping.

Dr. Copland has seen advantage from leeches applied to the epigastrium, and cupping over the hypocondria, so much so that the patient would sometimes ask for its repetition. It is said to relieve the pain and heat in the stomach, to lessen the quantity and saccharine quality of the urine.

Dr. Watt says that general depletion improves the state of the blood, and renders the weak and imperfect crassamentum more firm.

However there is often an objection to venesection on the patient's part, as they suppose that, from their weakness, they should rather have blood given than taken away.

Nutrients. Dr. Home first suggested the use of animal food and alkalies, with a view to their specific operation as septics.

Dr. Rollo insisted nearly in the exclusive use of animal regimen, as the most effectual mode of curing diabetes. He gave it with a view of resisting the secretion of saccharine matter, and of furnishing the elements of urea and animal salts to the blood, which he conceived were wanting. He enjoined an entire abstinence from vegetable food.

Dupuytren and Thenard contend that animal food is as sure a cure for diabetes as cinchona is for intermittents.

The greatest benefit has been derived from this treatment, but it often fails, and when too freely indulged, often causes diarrhœa, which exhausts and carries off the patient.

With a knowledge of this fact, Dr. Prout advised, in addition to it, a moderate use of farnicacious food ; and Frank used the decoction of Iceland-moss or althæa officinalis.

Before commencing the use of animal food, the patient's bowels should be brought into as natural a state as possible, and costiveness obviated by mild aperients.

During the rigid use of animal regimen there is considerable risk of inflammation of the thoracic and abdominal viscera, which is an argument in favour of the moderate use of farinaceous food.

Animal food, though it may not be adequate to cure the disease singly, will be found a powerful auxiliary to opium, venesection, and other remedies.

Dr. Rollo says that animal food has the power of abating the thirst, diminishing the unnatural quantity of urine, and rendering it more animalized, of relaxing the skin, and increasing the bulk and strength of the body.

It often produces disgust, and the patient will not adhere to it for any length of time.

Dr. J. L. Bardsley allows a small quantity of vegetable food, when the more urgent symptoms of the disease are subdued, and when at the same time the patient's strength and bulk rather diminishes, and the appetite has become impaired.

We should caution the patient not to indulge too freely in vegetable food, or expose himself to irregularity of diet: he should not eat oftener than once in three hours, nor at longer intervals than once in five hours.

We should in every way endeavour to restore the tone of the system, and to this end rhubarb and magnesia, mild aperients and tonics will be found most useful.

Narcotics. Opium has been given by many to diminish the nervous irritability of the system. It has been much tried, and great benefit seems to have attended its exhibition. Dr. Elliotson has exhibited it in many cases with good effect, Drs. Prout and Marsh consider it one of the most powerful remedies we possess in this disease; has the power of arresting the uric and salts of the kidneys.

It is said to exert an astringent effect on the kidneys, similar to that which it usually induces on the intestines, and in this way it dimishes the urinary fluid, and determines more sensibly to the skin, but it should be exhibited in moderate doses, and it will rarely be found necessary to administer more than six grains in the day.

Dr. J. Bardsley prefers the acetate of

morphia, as it does not produce the same constipation and pain in the head which opium so frequently produces.

Large doses of opium are said not to constipate in this disease: during its use the bowels should be kept regular.

It has been combined with tonics, astringents, diaphoretics, and antispasmodics.

Colchicum has been prescribed in this disease chiefly for its sedative properties.

Diaphoretics have been prescribed chiefly with a view to restore the suppressed perspiration of the skin, and thus diminish the determination towards the kidneys.

Amongst the various remedies of this class which have been exhibited with this intent, are Dover's Powder, in the dose of gr. x, 4 horis sing: sum: Tartarised Antimony, dose gr. 1-6, 3 horâ quâq.: sum: and gradually increased. If tartarised antimony acts on the bowels, it should be diminished in quantity.

Some combine antimonials with opium, and others put no faith in them.

Richter recommends tartar emetic, combined with valerian.

The same author speaks favourably of camphor exhibited in large doses in mucilaginous emulsions.

Dr. Marsh places great reliance on the warm bath, and to this may be added, the sulphur and iodine bath.

When the vapour or hot bath is used, they should he daily persisted in: they are said to mitigate the thirst and heat by establishing a free perspiration.

Friction has been used with a view to restore the function of the skin and tone of the system.

Active exercise has been recommended with the same intent: woollen clothing should always be worn next the skin, and the patient kept dry and warm.

Dr. Cullen mentions, that he cured a patient by sending him to a warm climate.

Diuretics are said by some to be contraindicated: they are, however, seldom employed, although some seem to think they may be of advantage.

Various derivatives and irritants have been used as blisters, moxas, setons, issues, and various stimulating liniments. The generality of writers seem to think woollen clothing, the warm bath, exercise, and friction, as the best derivatives.

OBSTETRIC APHORISMS,

By M. Ryan, M.D. &c. &c.

[Continued from page 734.]

Spontaneous Version or Evolution.

The term *spontaneous evolution* was first employed by Denman, and it has since been called *spontaneous version* by Murat. It is thus described, but it rarely happens at the completion of pregnancy, when the infant is full grown, though it may in premature labours.

There are two kinds of spontaneous version. 1. Sontaneous cephalic version.---2. spontaneous pelvic version. It was stated at the Medical Society of London, a year or two since, that an infant was born at the full time with the neck presenting and the head flattened on the back.

There are two kinds of spontaneous pelvic evolution.—1. The breech presents while the trunk and head ascend towards the fundus uteri. 2. The shoulder, neck, side of the head, chest, or back, is violently forced down into the pelvis, the pains continue, the breech is pushed down though the former parts does not recede. There are numerous authors cited by M. Velpeau who describe the latter evolution.

It would be, in my opinon, extremely bad practice in transverse presentations to wait for spontaneous evolution, and I feel convinced that nine out of ten women would die undelivered. Artificial version is now invariably preferred.

Instrumental Obstetric Operations.

The intentions in using instruments are;—

1. To preserve the lives of the mother and infant.
2. To preserve the life of the mother.
3. To preserve the life of the infant.

The instruments required to effect the first intention are—1. The forceps; 2. The lever or vectis; 3. The blunt hook; and, 4. Fillets or bandages. The instruments required to effect the second intention are, 1. The perforator; 2. The craniotomy forceps and osteotome; 3. The crotchet; and, 4. The blunt hook.

The instrument necessary to effect the third intention, is a scalpel or bistoury.

Rules for the application of the Forceps.—The orifice of the womb must be fully dilated, the membranes burst, and

the head or breech of the infant the descending part.

It is advised that the labour should have continued twenty-four hours before the use of the forceps (Hamilton), or that the head of the infant should have rested for six hours after the cessation of the labour pains in the cavity of the pelvis (Denman).

It appears to me that no determinate period of time can be fixed, because the head may become impacted, and not advance sooner than twenty-four hours, or even six, and the pains may be so strong as to make most injurious pressure on the bladder, rectum, or other soft parts within the pelvis, and cause contusion and sloughing; or rupture of the uterus. Moreover, when the head does not advance during strong pains, or is not in the natural position as regards the pelvis, the repeated pressure of the womb will destroy the infant, as well as destroy the mother in the manner already stated, and under such circumstances, the obstetrician would be no more justified in waiting, in my opinion, than in a case of hemorrhage, convulsions, or fainting.

But as a general rule, the precepts of Dr. Hamilton and Dr. Denman ought to be implicitly followed, as most women who have regular labour pains are delivered without instruments within twenty-four hours from the commencement of the function of parturition.

The exact time for applying the forceps must be subject to the judgment of the obstetrician in any individual case. The lower the head has descended into the cavity of the pelvis, the easier it is to apply the forceps. It should never be employed unless when there is real necessity, and never on the ground of saving the time of the obstetrician.

It is not necessary, according to some obstetricians, oftener than once in a thousand cases, and, according to others, as often as once in two hundred cases.

There is no danger whatever, either to the woman or infant, when the forceps, or any other blunt obstetric instrument, is judiciously applied.

The bladder and rectum should be empty before the forceps, or any other obstetric instrument, can be safely employed, or the operation of version performed.

The bladder should be evacuated with a catheter, and the rectum with an enema.

The use of the forceps is to diminish the size of the head when the pelvis is small, or the scalp is congested with blood by the uterine action, and the instrument is so constructed that this end can be accomplished without danger to the life of the infant, as nature leaves the sutures of the skull unossified, so that the bones of the head may overlap each other to a certain extent on the pressure of the instrument.

The same consummate wisdom is evinced in the conformation of the infantine pelvis, which is composed of fourteen bones united by cartilage, so that the breech may be compressed when it is the presenting part, to a considerable extent, without any serious danger to the life of the infant.

The shoulders of the infant also admit of considerable compression during parturition.

Thus the head, shoulders, and pelvis of the infant are so formed, that in certain circumstances, as when the infant is large, and the maternal pelvis small, they can be reduced and moulded to the passage of the parent by nature or by art.

No obstetric instrument or manual operation ought ever to be performed until necessity is explained to the relatives of the parturient woman or to herself when she possess a strong mind; so that an opportunity is afforded of calling in another medical practitioner, if convenient, should it be desired by the woman, her relatives, friends, or acquaintances. Every medical practitioner, whether old or young, ought to observe this precept.

The woman or her friends have an undoubted right to have opinion or assistance of as many medical practitioners as they please.

It is scarcely necessary to state, that the medical attendant may be considered too old or too young—and there may not be sufficient confidence in him.

It is always to be remembered, that women in labour have, in general, the greatest dread of manual or instrumental operations; and that humanity and religion command, every thing to be done to appease their fears and alarms, as these are always more or less prejudicial to their condition and restoration to health.

It may be necessary, as is well observed by Denman, to explain the object of using the forceps, or other blunt instrument, and to prove that no injury can be inflicted upon the woman or in-

fant, when the instrument is used with caution and judgment.

"In some cases of great apprehension I have also shewed them upon one of my knees, all I intended to do with the forceps."—*Denman's Aphorisms.*

I have long followed this excellent advice, and observed to women, that the instrument was blunt, and not cutting, that it could pass where the hand could not, and that its blades might be considered as artificial hands, and would not injure the woman or infant, and that the latter might or would be born alive.

This explanation almost invariably removes all fear and apprehension.

There are, however, some nervous hysterical, irritable, and impatient women, who, impelled by their fears, impatience, or sufferings, implore us to deliver them with instruments, long before there is a real necessity for using them.

Such individuals may be encouraged, by fixing some remote period at which it is most likely they will be delivered, as six or twelve hours, and unless they are, and when twenty-four hours of actual and regular labour have elapsed, that then instruments will be employed.

They should also be told, that most women are delivered within twenty-four hours, without instruments; that others remain in labour a day or two, and are safely delivered without artificial interference and that the good old remedies, time and patience, ought to have a fair trial—and that nature is the oldest and safest obstetric practitioner.

The forceps, or any other obstetric instrument ought never to be used clandestinely, or without the knowledge of the woman or of her friends.

There is always great caution required in the use of obstetric instruments, as great fears are entertained by most women, and great blame attached to the obstetrician unless the woman and infant do well ultimately, and unless he possess a high reputation.

It is always necessary to impress upon the woman the imperious necessity of remaining quiet during the use of obstetric instruments, for when she is restless, there is more or less danger of injuring her, however experienced the obstetrician may be.

When she moves suddenly, or changes her position, though the operator removes his hand off the instrument, it may contuse her slightly, and give her pain.

It is therefore manifest, that instruments ought not, as a general rule, to be applied without her knowledge, and not until having impressed her with the indispensable necessity of her remaining quiet and motionless.

Every woman endowed with common sense, will obey the advice of her medical attendant, when she places proper confidence in him.

The forceps is most commonly used when the head of the infant has descended into the cavity of the pelvis, and it should always be applied over the ears of the infant.*

It is considered improper and dangerous to employ it when the ear cannot be felt.

Before the head makes the half turn, and the face is placed in the cavity of the sacrum towards the back of the mother, one ear will be felt under the pubes, or under one of the rami of the ischia.

But when the face has fully turned into the cavity of the sacrum, a part of the occiput or hind head will be under the pubes, and the ears will be towards the sides of the pelvis.

As a general rule, the convexity of the forceps ought to be finally brought towards the concavity of the sacrum, or back of the woman, so that the concavity will be towards the abdomen, and the handles through the centre of the genital fissure, in the axis of the outlet of the pelvis.

The short forceps is used when the face is towards the cavity of the sacrum, or towards the pubes, or towards either ischium, when the crown of the head will be transverse to the genital fissure, and lastly, when the breech of the infant presents, the hips being towards those of the mother, or transverse to the outlet of the pelvis and genital aperture.

Before using the forceps, it should be brought to the temperature of the body, by being immersed in a basin of warm water, or held near a fire. It should then be wiped dry, and smeared with pomatum, lard, &c.

Position of the patient.—The obstetric position recommended by most British obstetricians is the left side, and the back, by foreign writers, which, in my opinion is by far the better, and more

* There is an exception in the case of the right occipito-iliac positions, in which one blade of the forceps is to be placed over the occiput, and the other over the forehead.

natural, and it also enables the operator to form a more accurate opinion of the relative situation of the head to the pelvis, and when using the forceps, he is not incommoded by the right inferior extremity of the patient as when she is placed on the left side.

The pelvis of the woman ought to be close to the edge of the bed, and she ought to be strongly impressed with the necessity of keeping it in this position.

When the patient is placed on the left side, the nurse or some other female must support and raise the right inferior limb, to allow the instrument to be introduced; but this assistance is not necessary, when the dorsal position is adopted.

The female assistant often allows the supported limb to fall against the blade or handle of the forceps, while it is being passed, which incommodes the operator, and pains the patient.

When the patient is placed on the back, her pelvis should be near the foot of the bed, or near the edge, or she may be placed across the bed---her head and shoulders being raised with pillows.

The lower extremities should be separated, each foot placed on a chair and the knees held by an assistant, and the obstetrician should sit on a chair, between the limbs, the person of the woman being covered.

POSITIONS OF THE HEAD AT THE OUTLET OF THE PELVIS WHICH REQUIRE THE USE OF THE FORCEPS OR LEVER.

1. *Occipito-anterior*—occiput or back of the head to the pubes, face to the sacrum.

2. *Occipito-posterior*—face to the pubes, occiput to the sacrum.

3. *Occipito—ischiatic*—occiput to the right or left ischium.

4. *Fronto — ischiatic* — forehead to the right or left ischium.

1. *Occipito---anterior position---back of the head to the pubes, face to the sacrum. Mode of applying the forceps.*

When the face of the infant is in the hollow or concavity of the sacrum, the sacrum, the operator should introduce the fore and middle finger of the right hand, lubricated as already described, to the ear of the infant, and then pass the left hand blade of the forceps along the palm of the right hand, and two fingers over the ear of the infant, the womb being kept external to the fingers and instrument.

The further introduction must be made with a semi-rotatory motion, and the point of the blade should be always kept in contact with the head of the infant by gradually raising the handle as the instrument is advanced.

The blade of the forceps must be cautiously passed upwards into the uterus, until the lock approaches close to the pubes.

If any impediment obstructs the passage of either blade of the forceps, the blade ought to be withdrawn a little, to discover the obstacle, and the operator should never attempt to overcome it with force or violence.

So soon as the first blade is properly applied, it must be held in its situation by an assistant, or by placing the handle between the thumb and fore-finger of the left hand, after the fore and middle finger have been introduced and placed over the ear of the infant.

The second or right hand blade must be passed along the palm and two fingers of the left hand, in the manner described when using the first blade.

When the second blade is properly to introduced, it should be opposite to the first, or very nearly so.

The next step of the operation is to lock or unite both blades.

In order to lock the blades, the handles must be depressed, raised, or partially withdrawn until they fall into the lock or joint intended to unite them.

Due care must be taken not to include any part of the patient in the lock or joint of the instrument, by passing the finger around it.

The handles of the blades may be tied together to prevent their slipping or changing their position, but a dextrous operator will secure them with his hand.

When the blades are improperly applied, they are not opposite each other, and cannot be locked, and if any attempt is made with them to extract, they will certainly slip, and may injure the soft parts within the pelvis.

When the handles approach each other closely, the bulk of the head is not embraced between the blades, and when extraction is attempted, the blades will slip and loose their position.

Again, when the handles are at a great distance from each other, the blades are not properly applied, and when traction is attempted, they will lose their situation.

When the forceps is properly applied it can never slip.

The difficulties encountered in applying the forceps arise from attempting to use it too soon, from passing its blades at random or hastily, or in a wrong direction, or from entangling some of the capillary growth or soft parts of the mother in the lock, or between the instrument and the head of the infant.

All these circumstances ought to be carefully avoided.

When the forceps is properly applied in the presentations under notice, viz. the face to the sacrum, and the occiput to the pubes; the handles of the instrument will be in the centre of the vagina, which is the axis of the outlet of the pelvis.

Method of making traction with the forceps.—Traction should be made from side to side, and upwards, towards the pubes, in the axis of the outlet of the pelvis in which the infant passes into the world in natural labour. It should be made "as if freeing a stiff drawer."

It should never be made forwards or downwards, as in such case the head would be drawn in a wrong direction against the sacrum, os coccygis and perineum, and could not be extracted without inflicting severe or fatal injury on the woman, or lacerating the perineum.

All operators unacquainted with the anatomy of the pelvis and the mechanism of parturition fall into this error, and do the most serious mischief both to women and infants.

As a general proposition, it may be fearlessly maintained, that no medical practitioner who has not attended obstetric lectures and demonstrations, ought to attempt any obstetric operation, as he must be a most dangerous operator.

Traction should be made during the labour pains, or at an interval of five or ten minutes, when there is a total want of pain.

When the head begins to descend, the force of traction with the forceps must be abated, as nature may now effect delivery.

But when the labour pains are absent, and the genitals rigid and undilated, care must be taken to bring down the head slowly and gradually, in strict imitation of what happens in natural labour, to support the perineum, and to prevent its laceration.

As soon as the perineal tumour is formed by the descent of the head, the handles of the forceps which are towards the abdomen, ought to be slightly depressed, so as to allow the occiput to escape under the arch of the pubes.

The obstetrician must now change his hold of the handles of the forceps, and grasp them, so that the back of his hand will face the abdomen of the patient.

He then supports the perineum with the left hand, while he makes traction with the right towards the abdomen of the patient, which will deliver the head in the curved line in which it passes during natural labour.

When the head is brought down so as to rest upon the perineum, some obstetricians, remove the forceps and leave the completion of labour to nature.

This may be done when the labour pains are strong and regular, and the perineum dilatable, but not when the pains are weak, and the perineum rigid.

In some cases there is delay in applying the forceps, and in others considerable force must be employed in using it, so that one operation may require a few minutes, and an other more than an hour.

In every case, we should use as little force as possible, and only increased when necessary, and we ought always remember the danger of contusing the soft parts of the woman, or the head of the infant.

The rule is, "*arte non vi.*"

When the head of the infant is born the forceps may be untied and removed, and the shoulders and body adapted to the pelvis, as in natural labour.

2. *Occipito-Posterior Position, Face to the Pubes---Occiput to the Sacrum---Mode of applying the Forceps.*

In cases in which the face is to the pubes, and the occiput in the concavity of the sacrum, the forceps is applied in the same manner as in the preceding presentation---the face to the sacrum. In this case the chin ought to be extracted under the arch of the pubes, by depressing the handles of the instrument, and closing the mouth of the fœtus, by placing the fore finger under the lower jaw. As the chin has escaped under the arch of the pubes, the handles of the forceps are to be raised towards the abdomen of the woman, in the same manner as described in the last presentation, and great care should be taken to support the perineum,

which becomes very much distended when the occiput is passing through the external genital fissure.

This second presentation is much more difficult and painful than the first, and requires very great care.

3. --- *Occipito-ischiatic* --- 4. *Fronto-ischiatic Positions---Occiput or Forehead towards either ischium---Mode of applying the forceps.*

The object in these cases is to pass one blade of the forceps over the ear which is under the pubes, and the other over the ear which is towards the sacrum. The convexity of the blades should be towards the face or occiput, so that when either is brought into the concavity of the sacrum their convexity will be adapted to it. It is better to turn the face than the occiput into the cavity of the sacrum, as this brings the head into the natural position in labour.

In applying the forceps in this class of presentations, the best position in which to place the patient will be on the left or right side, near the edge of the bed.

As soon as the blades are applied and locked, the face or occiput is to be turned into the concavity, and the mechanism will be that of the occipito-anterior or posterior position, as just described.

Positions of the Head at the Brim or superior Aperture of the Pelvis---These are the same as at the outlet just described, and are to be changed with the long forceps or lever, or by version, and when these fail craniotomy becomes necessary.

When the long forceps is applied on the head at the brim of the pelvis, its handles ought to be in the axis of the brim, and rest on the inferior commissure of the genital fissure towards the back of the woman.

But as soon as the head is brought into the cavity of the pelvis, or near the outlet, the handles of the instrument should be raised to the centre of the vagina or axis of the outlet. When the body is born, and the head remains in the pelvis, the short forceps may be applied, as in the occipito-anterior or posterior positions of the head, and the body of the infant should be supported, and turned towards the abdomen, while the head is being extracted, and perineum at the same time being well supported: the back of the infant ought to be brought near to the abdomen of the mother, as in ordinary cases of version.

The forceps may also be applied over the infant's hips in breech cases, great care being taken that the points of the blades do not press on the loins. The instrument is very rarely employed in such cases.

OBSERVATIONS ON JAUNDICE.

MORE PARTICULARLY ON THAT FORM OF THE DISEASE WHICH ACCOMPANIES THE DIFFUSED INFLAMMATION OF THE SUBSTANCE OF THE LIVER.

By Dr. Bright.

[From Guy's Hospital Reports.]

(*Continued from page* 744.)

It will however, I think, be found, that one of the most common causes of jaundice is what I have assumed as a fourth cause—a state of inflammatory action more or less generally pervading the substance of the liver; and it is highly probable, that in different cases different contituent portions of its intimate structure become more affected than the rest: but this is a point which requires stricter investigation than has hitherto been bestowed upon it. I consider this inflammatory state, in many respects, different from that very chronic action of which I have lately been speaking, and which may rather be called a state of long-continued irritation, than a state of inflammation. The causes from which it arises are frequently very different, and, besides irregularities of diet, include atmospheric exposure, the effects of external violence and injuries, the irritating effects of biliary concretions and of the retained bile, and perhaps the stimulating action of mercury. The symptoms likewise differ in many respects from those of the other forms, though not separated by sharp and abrupt lines of demarcation; and the changes produced on the substance of the liver are decidedly different, affecting much more generally the secreting portion than the connecting cellular tissue, and probably involving the branches of the portal vein in preference to other parts.

The progress of inflammation, in

these cases, varies so greatly in its intensity and in its rapidity, as to allow of a division being made into the more and less acute forms. It frequently comes on very insidiously, with symptoms and feelings of general constitutional derangement, depression of spirits, slow pulse, oppressed breathing, wandering abdominal pains, constipated bowels, and sometimes sickness of the stomach. In a day or two, the conjunctiva becomes tinged; and in a few days more, there is universal bright bilious suffusion of the skin. It is now found that the pulse is either accelerated, or sometimes still oppressed; and frequently, on pretty severe pressure about the region of the liver, some degree of tenderness is manifested; while in other cases, pressure produces little or no immediate suffering, but the pain comes on gradually a short time after the pressure has been made, and continues for hours or days. Cases of the less acute kind generally yield readily to treatment, if it be adopted early; and they form a large proportion of the cases of simple jaundice which present themselves in practice. In other cases, the inflammatory action is attended with much more severe symptoms, with considerable pyrexia, quick pulse, flushed countenance, and dry tongue, while a jaundice of the most intense colour is diffused over the whole surface. The stools are, both in the more and less acute cases, of a light colour; but less decidedly so, and subject to greater variations than when the obstruction is mechanical; and occasionally, after a few days, give little evidence of deficiency of bile. The urine is deeply tinged. When the disease assumes its more active and febrile form, those symptoms referrable to the brain and nervous system, and which appear to depend upon the deleterious effects of bile circulating in the blood, are more intensely marked than in any other form of jaundice; and the tendency to hæmorrhage sometimes comes on very early, and is excessive. In some cases, rigors, which assume the form of irregular intermittent paroxysms, form a prominent feature, as the disease advances; and then it often happens, though not always, that suppuration is established; and this may be going on to a great extent, while still the jaundice has rather decreased, or varied exceedingly in its intensity.

In cases of jaundice from inflammatory action, the condition of the liver after death differs according to the period at which the disease has proved fatal; but, in general, the size of the organ is not materially increased; though, on the contrary, it is not unfrequently perceptibly diminished. There is no accumulation of bile in the minute ducts, and the yellow tinge which pervades certain portions of the structure is scarcely more than other structures of the body have obtained from the bilious impregnation with which the blood is loaded, and bears no analogy to the dark green of the liver, loaded with bile from obstruction in the large ducts. On examining the gall-bladder, it is found to contain little bile, and sometimes scarcely a trace of that fluid is to be discovered colouring the mucus acumulated by the secretion of its lining membrane.

When the disease has terminated early in its course, the whole liver seems rather soft and flaccid; the surface appears variegated, of a light-yellow, and dark-red or purple, in patches; and certain portions project above the rest, which, when cut through, sometimes prove of a softer texture, and even to be undergoing a process of change or disorganization; and portions of the same kind are intermixed throughout the whole substance of the liver; while, at other times, the yellow portions are harder than the surrounding substance.

If the disease has not proved fatal at the early period, and while the jaundice is in its briliant and intense form, but has gone on for some weeks, till the skin has assumed the light lemon-colour tint which often bespeaks a very general disorganization of the liver, we find the structure extensively altered, and a great many of the acini apparently altogether incapable of receiving such a quantity of blood as is necessary for the secretion of the bile, or for giving the healthy colour to the organ. They are then of a whitish-yellow colour, and rather hard and contracted than enlarged; and these altered acini are seen in groups and clusters, which, on careful examination, will generally be found to follow the course of the divisions of the portal vessels, so as to be disposed around them like a sheath, which sometimes extends to the thickness of a quarter of an inch.

There is still another condition of the liver, apparently resulting from this dif-

fused inflammation of its substance, aud which occurs when the stage of suppuration has become gradually developed; we then find the river pervaded by a multiplicity of abscesses, all of which seem tending to discharge themselves into branches of the portal vein, which then assumes a most unhealthy suppurative appearance along large portions of its course.

With regard to treatment, in cases where jaundice depends upon inflammatory action, it must always be decided antiphlogistic; but it is only where it presents itself under the more violent forms, that general bleeding need be employed. In other cases, cupping from the margin of the ribs, and (as soon as the bleeding is stopped) the assiduous application of poultices over the liver, will be most important remedies. The combination of calomel, antimony, and opium, must be occasionally administered; and antimonials must be combined with the purgatives, which, in the form of pills, should be given to act regularly on the bowels, and should be aided occasionally by the sulphate of magnesia and other saline purgatives; and, in many cases, the saline purgatives, alternated occasionally with mercurials, are sufficient to cure the disease. A free and uninterrupted action from the skin is most desirable; and to promote this more effectually, the warm-bath may be very advantageously employed; and the poultice, while it restrains the patient in bed, assists forcibly as a diaphoretic measure.

Under treatment of this kind, a very large proportion of cases are completely cured; and where the result is otherwise, it generally arises from some complication of diseases; most frequently from previous disorganization of the liver, or from neglect, on the part of the patient, in not applying for medical aid, or in not steadily pursuing the plan laid down, for it is not uncommon to find persons inclined to make light of an attack of jaundice, if the pain or inconvenience attending it is not such as to prevent them altogether from pursuing their usual occupations. Nothing, however, can be more injudicious; and it is the duty of the practitioner to impress this upon his patient; for it can never be a matter of slight importance that either obstruction or inflammatory action should exist in the intimate structure of a secreting organ, and still less in an organ so delicately complex as the liver; and there is no reason to doubt, that although, even without treatment, an attack of this kind may pass off, the liver will be some time before it has completely recovered; and thus a tendency to relapse, or to a renewal of the complaint, may occasionally be observed, shewing itself at longer or shorter intervals throughout life, and terminating at length in the destruction of all the powers of the stomach, the ulceration of the colon, miserable emaciation, or universal dropsy.

It is not my intention to burden the present communication with the detail of the milder cases; but I will give a slight sketch of one or two instances of the more usual forms of this disease.

Case 1.---*Jaundice, following Intemperance and Exposure.*

William Barthram, aged 18, was admitted into the Clinical Ward, Nov. 30, 1831, labouring under jaundice of a clear bright tinge, not very deep. He had been in the habit of driving hackney-coaches for the last five years, and had drunk freely of porter and spirits; had suffered from gonorrhœa three times within the last two years, and was not quite cured at the time of his admission. Six weeks before, he had taken mercury till his mouth was sore. Seven days before, he felt himself very heavy and dull, and on looking into a glass, found his eyes of a deep yellow colour, since which his whole skin had become jaundiced. The chest and abdomen were particularly coloured, the latter of which was tense and hard; and he complained of some pain in the right side, which he said had been coming on for the last three months. Tongue slightly coated with a white fur; bowels not open since the preceding day; pulse 82, full, but sluggish in its beat; appetite moderate.

Habeat Pilul. Colocynth. c̄ Cal. gr. xij. statim; et Haustus Sennæ vespere, si opus fuerit.

Mistura effervescens.

Dec. 1. Jaundice more general and deep. Two copious stools, solid, and of a dark clay colour; urine of a deep colour, like the infusion of senna: pulse 81, full and jerking; tongue cleaner.

Habeat Hydrarg. Submur. gr. i. sextis horis.

The calomel was repeated in these doses for ten days, after which blue pill

was given, at longer intervals; and during the whole time infusion of senna and magnesia, and sulphate of magnesia, were repeated till the bowels were freely opened. After the lapse of one month, he was discharged, quite well.

CASE 2.---*Jaundice from Exposure.*

WILLIAM LINDO, aged 21, was admitted into the Clinical Ward Jan. 18, 1832, labouring under jaundice; a short stout young man, who had been for the last month without employment, during which time he had experienced pain at the pit of the stomach, coming on at intervals with considerable severity; bowels much constipated. He had been in the habit of drinking freely both porter and spirits, till the last month. Three days ago he observed his face more yellow than natural, and this had increased ever since. At the time of his admission, his whole body was of a decided clear bright yellow colour. Tongue moist, and nearly clean; pulse 72, somewhat jerking; skin moderately warm; lower lip and gums tender, and a little ulcerated; bowels not open for three days; pain in the head at intervals, coming an most severely at night. He complained of a sense of weight at the pit of the stomach.

C. C. scrob. cord. ad ʒxij.
Hyd. Submur. gr. v. bis die.
M. M. c M. S. ter die.

Jan. 19. Cupping gave much relief; bowels not open since admission; urine of a deep brandy colour, and not coagulable; tongue moist, and nearly clean; pulse 84, somewhat hard.

20. Three copious massive dejections, of a light-yellow colour, and very deficient in bile. Tongue moist and clean; pulse 60, full and sluggish; skin as before.

Haust. Sennæ statim, et pergat.

21. Four copious light yellow-coloured motions, with a little bile; urine scanty, of deep blood-red colour, and depositing a light red sediment, and tinging white paper yellow. Tongue moist, and quite clean; pulse 60, full and sluggish.

Pergat.

22. One stool, loose, and more bilious; abdomen rather tympanitic.

Pergat.

23. Three or four stools, more bilious; urine less tinged; pulse 48, sluggish; abdomen still tympanitic; appetite good.

Pergat.

24. Three stools, almost healthy; urine very turbid, but less tinged; pulse 60; tongue clean.

25. Continues improving.

Hyd. Submur. gr. v. quotidie.—Pergat.

26. One scanty stool, of lighter colour. Is improving.

Decoct. Aloes comp. ʒʃs semel vel bis quotidie.

27. One copious stool. Pulse 83, rather full, but readily compressed.

28. Gradually improving.

Ext. Tarax. ℈i. ter die.
Omit. Hyd. Subm.

30. Yellow tinge on skin returning. Bowels not open.

Haust. Sennæ.---Pergat.

31. Three stools of light yellow colour, very offensive. Tongue clean; pulse 60, and sluggish; skin of straw-yellow colour.

Pil. Hyd. gr. v. bis die.—Pergat.

Feb. 1. No stool.

Haust. Sennæ.—Pergat.

He went on gradually improving.

21. Went out, well.

It would be an easy matter to multiply such cases to an almost unlimited extent; but I shall rather proceed to the detail of those which, having terminated fatally, have afforded the means of forming a conclusion as to the cause of the complaint.

CASE 3.—*Jaundice from Contusion of the Liver, followed by extensive Disorganization of its Structure.*

CHARLES YOUNG, aged 24, was admitted into Guy's Hospital, January 14, 1829, affected with jaundice of a decidedly bright colour, though not of the most brilliant hue. His tongue was furred and brown, and inclined to become dry; urine of a deep yellow tint; stools rather loose, and of a light clay colour; pulse quicker than natural. The account he gave was, that about three months before, while lifting a piece of timber, it slipt, and his elbow was driven in against his right hypochondrium with much force, and kept in that position for some time, till assistance came. He was a good deal hurt at the time, and the pain increased so much that he was obliged to get medical aid, when a blister was applied, and, after some other simple remedies, he appeared to be nearly well; but about six weeks ago he began to feel weariness, and other general symptoms of indisposition, at-

tended by pain in the side; and, just three weeks before his admission, the jaundice came on rather suddenly, so that within three days it had acquired its present state of intensity.

He was confined to his bed, cupped, took mercurials, purgatives, and diaphoretics. As he was not my patient, I saw him but seldom; but, after he had been ten days in the hospital, his colour was less intense, and his stools more natural. There was no tumour to be felt in his side, nor did he complain of pain when pressure was first made; but after any examination of that kind, he experienced a dull wearing pain, which continued for an hour or two, and gradually subsided. His tongue had two brown stripes upon it, and got very dry at night.

Feb. 1. The colour is more faint, but he has evidently lost flesh. Urine still highly tinged with bile. Stools improved.

12. Colour much more faint; the abdomen tympanitic, and painful on pressure.

19. Abdomen remarkably hard and tense, with extensive fluctuation. His countenance is now of that sallow yellow colour which belongs to extensive disease in the structure of the liver; urine very scanty.

25. The ancles are become œdematous.

March 10. The sallow colour still remains; the abdomen distended; he gets weaker. On the 15th, he died.

Sectio Cadaveris — *March* 16. Nearly four gallons of serum in the abdomen. The heart and lungs very healthy, as were also the kidneys; all the viscera of the abdomen healthy, except the spleen and liver. The spleen was large and soft. The liver shewed decided evidence of former peritoneal inflammation, the right lobe being united to the parietes by three or four firm bands of adhesion. The liver was small and contracted, with a lobulated surface. When cut into, the whole structure was altered, and converted into congeries of small globular bodies, larger than acini, and generally of a lighter colour than the healthy organ. It broke down pretty easily; and when torn through, a granulated appearance was observed. The portions of the structure which surrounded some of the larger branches of the portal vessel were evidently most diseased, so that these vessels, when cut transversely, seemed surrounded by a whiter ring; and when the vessels were laid open, the internal membranes bore a speckled white appearance, from the acini with which they were surrounded. The larger vessels contained a good deal of blood, and the spaces between the acini were purplish with blood. The gall-bladder contained about half an ounce of very light yellow bile; the ducts were pervious. In this case there was a combination of the inflammation of the peritoneum and cellular membrane with that diffused inflammation of the secreting structure of the liver of which I am speaking. It had been left too long before regular treatment was adopted, and led to the general disorganization of the liver, and its consequences.

(To be continued.)

DEATH OF DR. HUGH LEY.

We cannot, without feelings of deep regret, announce the decease of this highly talented and much-respected individual.

Having long suffered from chronic rheumatism, which, besides other organs, affected the heart, his life was ultimately terminated by repeated pericarditis and its consequences.

Notwithstanding his premature decease, he was not only much esteemed by his professional brethren as a practitioner, but he had also distinguished himself as a lecturer, and for his contributions to medical science.

He had acquired such popularity as a lecturer on obstetric medicine, that when the lecturer at Bartholomew's Hospital was not considered fit for the situation, Dr. Hugh Ley was solicited to fill the chair; where his valuable prelections were duly appreciated. He possessed great powers of addressing his hearers, and on many occasions his language became eloquent.

His work on *Laryngismus Stridulus*, but lately published, may be considered as by far the most important of his writings, displaying laborious research, careful investigation, and decided talent for personal observation. It contains a detached account from the earliest period of medical history, of all that relates to the spasmodic affection of the larynx of children.

It also contains numerous cases where

this disease proved fatal, and where it was found on dissection, that the lymphatic glands of the neck had swollen, and pressed on some of the adjacent nerves.

For this important pathological fact, we are indebted to Dr. Ley, the practical benefit of which, he amply illustrates by narrating cases, which he successfully treated by curing the disease of the glands.

He was also the author of several memoirs, which were published in the *Medical Gazette*, and all of which were highly creditable to his industry and talents.

As a member of the medical profession, it is but a just tribute to the memory of Dr. Ley for us to express, how much he was esteemed for his highly just and honourable conduct towards his brethren in the performance of the practical duties of his profession. There was a modesty in his deportment, which rendered his co-operation, as a consulting physician, always acceptable; and the kindness and benevolence of his disposition, along with the natural suavity of his manners, never failed to gain for him the confidence as well as the esteem of his patients.

DEATH OF DR. TURNER,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY COLLEGE.

It is also our melancholy duty to announce the death of another individual, who was deservedly considered as an ornament to the medical profession.

Dr. Turner has been known in the more immediate circle of his friends, to have long suffered from symptoms of pulmonary phthisis, and he at length became a victim to that formidable disease.

Both as a lecturer and as an author, he had justly acquired the highest reputation.

He commenced his career at Edinburgh, as a private lecturer on chemistry, and when the London University College was about to be established, such was the reputation that Dr. Turner had already acquired, he was unhesitatingly appointed professor of chemistry in that institution. His success as a teacher, affords incontestible proof of the wisdom shewn in electing him to that chair; and it cannot be denied, that whilst his friends and admirers will deplore his untimely loss, the University College will receive a blow, which in their present inefficient and crippled condition, they will not easily, nor perhaps very soon, be able to recover.

The fame of the University had alone rested on the superior acquirements and acknowledged talents of Dr. Jonas Quain and Dr. Turner; so that the resignation of the one, and the premature death of the other, have bereft the Medical School of the important services of those individuals, on whom its prosperity had chiefly, or almost solely, depended.

Dr. Turner's Elements of Chemistry have been justly considered as a work of standard authority in chemical science; and establishes his character, not only as a man of great industry and research, but also as an acute scientific observer.

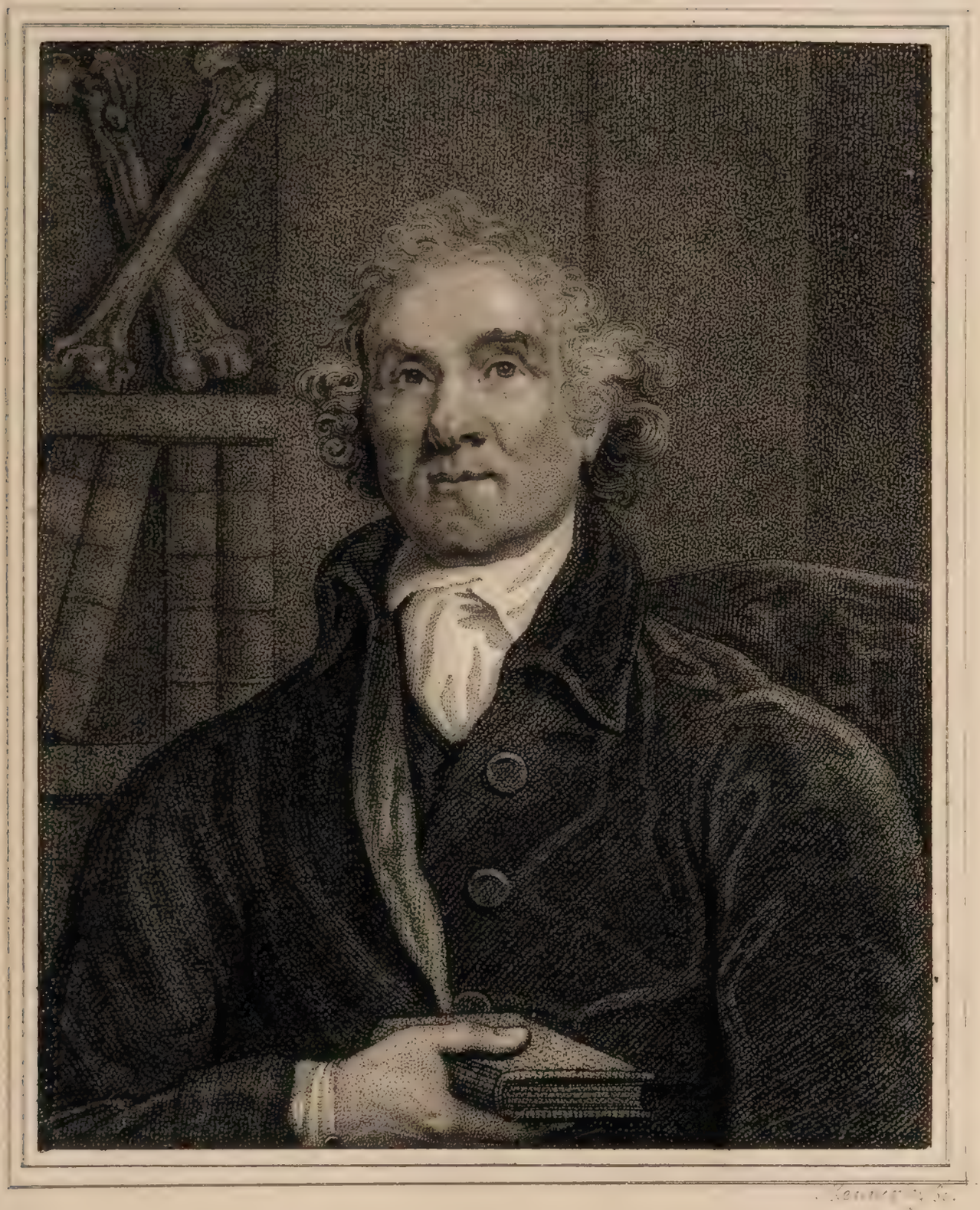
Had he lived, not only might he have continued to teach his favourite science with benefit to his numerous hearers; but he likewise possessed a mind, quite capable of enlarging the bounds of human knowledge.

The London Medical
AND
Surgical Journal.

Saturday February 18, 1837.

THE HUNTERIAN ORATION.

This annual oration was delivered on Tuesday last, by Sir Benjamin Brodie. The circumstance of the *new* building of Lincoln's-Inn-Fields having been completed, its opening created a good deal of interest. The numerous applications of the *commonality* for tickets rendered it impossible to give admission to students. At an early hour the theatre was crowded to excess, and besides a few distinguished members of the profession, we observed present, several great dignitaries of the church, the Duke of Wellington, Sir Robert Peel, &c. &c.



Mr JOHN HUNTER

late Professor of Anatomy & Surgery in London.

When the ORATOR first made his appearance, there were several and repeated indications from different parts of the theatre, of *murmurs*, but in a short time these ceased, and a respectful silence was obtained.

A report having been prevalent that on this occasion some account would have been given of the numerous volumes of manuscripts, the contents of which had been *supposed* to have been published by Sir Everard Home, great interest was excited to learn any thing regarding these most extraordinary transactions, and the public being extremely anxious to have had the evidence of Sir Benjamin Brodie, touching the authenticity of Sir Everard Home's writings, it being generally understood, that the worthy Baronet had been intimately associated with Sir Everard, at the time he was contributing his numerous papers to the Royal Society, and that he might have materially assisted in gratifying public curiosity upon some important points.

There was, therefore, an evident feeling of disappointment expressed by the audience, when the ORATOR merely stated, when pointing out Sir Everard Home's *great* talents and *wonderful* discoveries, that there was "*a shade* on Sir Everard's character."

The only other subject to which the slightest interest could be attached in this great oration was the allusion made to the *new* building—in which the additional accommodation for preparations, and library, are very consideralbe—the whole has been heated, at an enormous expense, with warm water, which, with the alterations and additions, must have cut very deep into the *sinking funds* of the college!

We cannot help adverting to the absurdity, we would even say impropriety, of soliciting the attendance of such personages as the DUKE OF WELLINGTON, Sir ROBERT PEEL, and the BISHOP OF LONDON, on an occasion of this kind. The circumstance of the gallant DUKE being absolutely *asleep* during nearly the whole oration, is a sufficient proof of *his* interest in the discoveries of John Hunter, whilst it gives an unfavorable impression to an audience to see a man so truly great in his own sphere of life, under the *soporific* influence of a medical oration!

VACANT CHAIR OF CHEMISTRY IN THE LONDON UNIVERSITY COLLEGE.

THE vacancy which has taken place in the Chemical Chair of this University, already excites a good deal of interest and speculation—interest as regards the well being of the Institution, and speculation as to the mode which will be followed in electing a successor to the late justly esteemed Dr. Turner. The mode which the senate adopts on this occasion, will either be the means of wiping away the deep stain which has been so justly made on the medical officers of that College, for the base system they have hitherto adopted in most of their elections—or what we fear is far more probable, there will be a repetition of that disgraceful jobbing and intrigue which created such universal disgust on a late election. To preserve this public *estimation*, the Medical Faculty have only again to commission a diplomatic agent, and send him to modern Athens to negociate for a Professor on such terms as will be most likely to suit some private interests, though it might be a much more politic measure, and at least make one

attempt to save their reputation, if they were to leave the Chair open to a just and honorable competition.

LONDON UNIVERSITY COLLEGE.

Professor Chritison, of Edinburgh, is to succeed the late Dr. Turner in the University College; so that the Edinburgh University already feels the effects of the New Metropolitan University.

THE LIBRARY OF THE COLLEGE OF SURGEONS.

The library of the Royal College of Surgeons is now open to members and visitors, as heretofore. Every member is allowed the privilege of attending on writing his name in a book; and visitors, articled pupils of the college, and medical students, are allowed the use of the library, by writing to the Court of Examiners and Council of the College for permission.

A reading-room, for members only, is open from seven to ten o'clock, in the evening, on Mondays, Wednesdays, and Thursdays.

N. B. The library of the College of Physicians is hermetically sealed against the members at large, except a few fellows!

MORISON, *v.* HARMER.

Our readers are aware, through the public press, of the action for libel, brought by Morison, the Hygeist, against Alderman Harmer. The defendant produced the most distinguished physicians in the metroplis, to prove the danger of the indiscriminate use of Morison's Pills, by persons of all ages, and labouring under different diseases Verdict for the Plaintiff, £200 and costs. Such is the law of libel. The government stamps used by Morison, during the last six years, were 3,901,000, and the sum paid for them, £39,555, so that quackery will not be interfered with by a ministry whether Tory or Whig.

PROFESSORSHIP OF SURGERY AT THE UNIVERSITY COLLEGE.

To the Editor of the Medical and Surgical Journal.

Sir,

As many of your readers may not have had an opportunity of perusing the letter of which I send you a copy, may I request of you, as a man of justice, to insert it in your pages; as I do think, it is the precursor of an attack on the character, and an attempt to destroy the interests of an individual, whom I may safely say, that the whole profession holds in the highest estimation, and to whom they are deeply indebted.---Justitia.

UNIVERSITY COLLEGE.

To the Editor of The Lancet.

Sir:---It is with reluctance that I make any complaint connected with this establishment, but the murmurs of the students are becoming louder every day, from the ineffective character of the lectures on practical surgery, which are delivered in the theatre of our College. How is it, we are all desirous of knowing, that Mr. Liston confines himself to delivering clinical lectures at the hospital, and never takes a share of the labour with Professor Cooper, by lecturing in the chair of surgery in the theatre of the College? If Mr. Liston feels disinclined to undertake this duty, we think he should be admonished by the Council of the College. The value of his practical information in surgery may be estimated by the fact, that his lectures in the hospital exceed, by four, five, and sometimes ten times the number of those who attend any other lectures. We all know that Professor Cooper is

most anxious for the aid of the great talents of Mr. Liston, and I amongst many others, think that we have a right to complain, when we know that the chair of practical surgery is only half filled in this establishment. In the history of surgery, Professor Cooper has probably no equal in point of information. In the practice and operations of surgery, it is doubtful if Mr. Liston has ever had his equal. The united labours of these gentlemen in the chair of surgery would, therefore, be productive to us of indescribable advantage. Trusting that the subject will be brought under the notice of the proprietary at the forthcoming anniversary meeting of the Council, I remain, Sir, your very obedient servant,

AN UNIVERSITY COLLEGE PUPIL.

Feb. 7, 1837.——*Lancet.*

There was a meeting of the medical students of Professor Cooper's class on Wednesday evening, when their justly celebrated teacher addressed them, and stated, that in consequence of his appointment as examiner at the Royal College of Surgeons, he proposed that Professor R. Quain should take the operations of surgery;---a proposition received with loud acclamation.

This is highly creditable to the justice and proper feeling of the university college students towards their universally respected and famed professor, whose dictionary of Surgery is duly esteemed in all countries.

GERMAN CONTRIBUTIONS TO PRACTICAL MEDICINE. Communicated by ROBERT THACKER, M.D. Derby.

(From the Medical Chirurgical Review.)

THE following interesting observations on the diseases and state of medicine in Chili, are condensed from Professor Poeppig's "Travels in Peru, Chili, and on the River Amazon."*

"The population of Chili is rapidly on the increase, owing to the many advantages enjoyed by the inhabitants in their political position, and also to the circumstance that they are very little exposed to the diminishing influence of disease. Indeed, whatever has been said by earlier travellers of the remarkable healthfulness of the climate, may be credited in its fullest extent. Neither the extreme aridity of the northern provinces, nor the long-continuing and severe rains in the southern, would appear to exert any particular influence on the duration of life or on the health of the natives. In Mendoza and San Juan, which are only separated from Chili by the chain of the Andes, all classes of the inhabitants suffer severely from scrofula, and cretinism is not infrequent; in Chili, on the contrary, the latter is entirely unknown, and some traces of the former are only occasionally observed among the residents of the northern parts of the country at the foot of the Andes. The foreigner who makes a lengthened stay in Peru may regard himself as fortunate if he escape a tertian intermittent, which will frequently bid defiance to the most careful and judicious treatment. In Chili, on the other hand, there is no fear whatever of this disease, indeed, many Peruvians affected with it come yearly into Chili with the view of regaining their health. The regularity of the meteorological phenomena, the gradual manner in which changes of temperature take place, the purity of the water used for drinking, the constant winds, and the absence of marshes and damp woods, are the main causes to which the Chilians of all grades are indebted for the particularly good health they enjoy. The infectious diseases occasionally introduced soon loose their virulence under the sky of Chili. The contageous putrid fever of Guayaquils is only remembered to have once appeared at the commencement of the present century in some of the northern sea-ports. Small-pox alone is of frequent occurrence, and the fatality occasioned by it is sometimes considerable. The opinion is commonly entertained that this disease always comes from Peru, probably because it generally makes its first appearance at some sea-port station. Epidemics of small-pox usually occur towards the end of the Winter, and from July to November, and it is observed that they assume a more malignant character as the wea-

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* This excellent work was published not long ago, and is the subject of a highly laudatory article in a late number of the "Foreign Quarterly Review." The autho is a talented, observant, and erudite man.

ther becomes fine and warm, and the intervals of rain are longer. The mode of life of the lower classes, and the great want of cleanliness in their habitations, are circumstances favourable to the propagation of the disease; and under this head we must not omit to mention the deplorable maltreatment experienced by the sick, who are confined in the most secluded corner of the house, and dosed with all kinds of rubbish, large fires are lighted, all access of fresh air is carefully guarded against, and the poor patient almost smothered under woollen cloths—a proceeding, it may be remarked, which is observed in almost every case of illness. About 30 years ago, the Spanish government transmitted cow-pox matter to Chili by a man-of-war, but the indolence of the inhabitants has hitherto formed a serious obstacle to the introduction of a general practice of vaccination. Companies, supported by the government, are now instituted; their object is to extend vaccination, and this benefit is conferred on the poor gratuitously. At 8 localities, a vaccinating physician has been stationed, with a yearly salary of from 240 to 480 duces, and one of these gentlemen, named Alvear, fortunately discovered the vaccine pustule in the town of Chili. In the years 1828, 1831 and 32, an epidemic of a peculiarly malignant character prevailed, and the people, drawn by fear, came in great crowds to be vaccinated, so that from 1830 to 1832, the total number of those vaccinated amounted to 37,834. The Indians suffer far more from the ravages of small-pox than the Chilians.

Acute diseases seem on the whole to occur but seldom, with the one exception of typhus, which here, however, is not wont to destroy the powers of life so suddenly as in other countries. In the towns and cities the mortality is greater than in the country. With respect to chronic affections, the secondary symptoms of syphilis are of the most frequent occurrence; in fact, lues venerea may be considered epidemical in Chili; yet such is the beneficial influence of the climate, that in this country, as indeed throughout the whole of South America, this disease, formidable as it is in northern Europe, is almost entirely divested of its terrors. The countryman pays attention to his diet, drinks infusion of sarsaparilla, and not infrequently recovers completely without the use of metallic remedies. In large towns, however, the disease is not so easily removed, which is partly to be ascribed to the empirical treatment adopted; for here, as in all other countries, how remote soever, of the extra-European world, LEROY's celebrated panacea plays a very prominent part, and many other nostrums of Spanish origin are also high in favour. Among the Indians of Chili, lues is not common, and it does not appear to have been ever communicated to the races on the eastern side of the Andes.

It would seem that with the spread of civilization in Chili, diseases heretofore unknown, and which we may feel little disposed to regard as a consequence of our social condition, were at the same time introduced. Thus it is a fact that scarlet fever was not known up to 1831, when it suddenly broke out as a violent epidemic. Yet it was mild, for according to the report of the protomedicus, among 547 cases, there were only 25 exhibiting a malignant type (under the form of Febr. scarlat. miliaris), in which typhoid symptoms supervened. Of the latter 6 or 7 died, but of the whole number only a twelfth part terminated fatally.

The science of medicine has hitherto made but small advances in Chili, and it is only within a very recent period that really competent men have begun to enjoy some portion of public esteem. Twenty years ago medicine was practised by men of colour and the most ignorant quacks, the hospitals were entirely under the control of the monks, and the few well-informed physicians, those, namely, who had received an European education, found in Lima, a more lucrative field for their exertions than was offered to them any where in Chili. This state of things, however, no longer obtains, for the number of physicians is now even greater than necessity requires, and there is a college at Santiago at which medicine is taught, although on a somewhat compendious plan. Still there is a scarcity of educated practitioners in the country, where the healing art is chiefly exercised by matrons and old Indian women. The country people are tolerably familiar with the virtues of the rather numerous indigenous plants, but to many of these properties

are attributed which the individuals in question do not really possess, and many other remedies, supposed to be of great efficacy, are solely indebted for the estimation in which they are held to a credulous superstition. When any particular part of the human body is the seat of disease, the remedy is sought for in the corresponding part of some animal, variously prepared; thus, for opthalmic disorders, the carbonized eyes of birds of prey are administered, the claws of the condor are given for gouty pains of the hands, and the flesh of the smooth-skinned lizard for scurfy affections of the skin. For the treatment of ordinary cases, the simple materia medica of the country suffices."—*Poeppig's Reise in Chile, Peru und aufdem Amazonenstrome.* S. 524—531.

LINNEAN SOCIETY.

February 7th, 1837.

A. B. LAMBERT, Esq. V.P. *in the Chair.*

The Chairman exhibited a new kind of manna which had lately been brought from Mount Sinai by Lieut. Willstead, and which he had no doubt was the same as that mentioned in Scripture. A communication was read from C. C. Babington, Esq. on a new species of *Festuca* found by him near Bristol; after which, a paper was read by Mr. Broughman on the genera Polygonum and Epipactis, in which he endeavoured to prove that E. purpurata was merely a variety of E. latifolia, the only difference being in the colour of the leaves and odour of the root. Mr. Westwood read the continuation of his paper on the analogies existing between the different classes of insects, after which the meeting adjourned to Feb. 21st.

HIMALAYA,

OR

MOUNTAIN RICE.

Specimens of this rice were forwarded some time since to the Society of Arts, in the belief that from the great height above the level of the sea at which it is grown in Nepal, it might be advantageously introduced as an agricultural crop in the north of Europe. In consequence, Mr. Anderson, the curator of the apothecaries' garden at Chelsea, undertook to make an experiment on the possibility of growing it in England, and was in consequence furnished with some seeds. They were sown in March, and some germinated and did very well while they were kept in the hot-house. In May they were removed to the greenhouse, where they became stout, healthy plants. In the end of June they were transferred to a sheltered place in a basin for the growth of aquatic plants, having nine inches depth of water and twelve of mud; here they grew and prospered well till the beginning of August, when, the weather becoming cloudy and rather cold, they became sickly, and were all dead by the beginning of September, without having come into flower. It seems, therefore, evident that the temperature even of the warmer parts of England is not sufficient for the successful cultivation of hill-rice.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES,

February 9, 1837.

William Dalla Husband, York.
Thomas Johnson, Manchester.
James Edward Newall, Aberystwyth.
Henry Laxton, Bristol.
William Cheesewright, Bristol.
James Stephens, Manchester.
Edwin Chabot, Lambeth.
Charles James Jump, Wisbeach.
James Parkerson, East Dereham.
Henry Lacy Pomfret, Manchester.
Richard Baker Bellyse, Audlem, Cheshire.
Thomas Mark Hovell.
John Gilby, Alford, Lincolnshire.
George Kinghorn Prince, Jamaica.
Alfred Baker, Birmingham.

WEEKLY ACCOUNT OF BURIALS,

FROM BILLS OF MORTALITY,

February 7, 1837.

Age and debility	113
Apoplexy	5
Asthma	62
Cancer	1

Childbirth	4
Consumption	86
Convulsions	37
Croup	6
Dentition or teething	12
Dropsy	17
Dropsy in the brain	9
Dropsy on the chest	1
Erysipelas	1
Fever	9
Fever, Scarlet	1
Fever, Typhus	6
Heart, diseased	4
Hernia	1
Hooping cough	14
Inflammation	82
Bowels and stomach	6
Brain	2
Lungs and Pleura	19
Influenza	63
Insanity	3
Liver, diseased	3
Measles	10
Miscarriage	1
Mortification	5
Paralysis	3
Rheumatism	1
Small-pox	2
Sore throat and Quinsey	2
Spasms	1
Thrush	1
Venereal	1
Unknown causes	2
Casualties	2
Decrease of Burials, as compared with the preceding week	262

BOOKS FOR REVIEW.

Evils of the Factory System demonstrated by Parliamentary Evidence. By Charles Wing, surgeon to the Royal Metropolitan Hospital for Children. Royal 8vo., pp. 496.

London, 1837: Saunders and Otley.

A Translation of the Pharmacopœia of the Royal College of Physicians of London, 1836; with notes and illustrations. By Richard Phillips, F.R.S., &c. *By permission.* 8vo., pp. 392.

London, 1837: S. Highley.

The Life of John Hunter. By Drewry Ottley, Esq. Compiled from original sources, and embracing an account of the Hunterian Museum.

Lectures on the Principles of Surgery, delivered in the years 1786-7, with notes by the Editor.

Volume II. will be published on April 13, with notes by Thomas Bell, F.R.S., and G. G. Babington, surgeon to St. George's Hospital.

London, 1837: Longman and Co.

A Treatise on Painful and Nervous Diseases, and on a new Mode of Treatment of Diseases of the Eye and Ear. By A. Turnbull, M. D. Third edition.

London, 1837: J. Churchill.

TO CORRESPONDENTS.

PAGANINI'S request of the Editor, since he has renewed the *leaders* in his journal, not to fatigue the mind of the reader with long discussions of the POOR LAW COMMISSIONERS, MEDICAL CORONERS, &c., will be duly attended to.

PAUL PRY ought to know, that the subscription from the LIONS of the North London Hospital, for defraying certain electioneering expenses, as appears by the list of contributors, amounted to £5,—the precise amount of the purchase of the flag of truce in the case of the coner's election.

ANOTHER M. D. CREATED BY THE ARCHBISHOP OF CANTERBURY.—His Holiness has conferred the degree of Doctor in Medicine on Mr. Davis, apothecary to the King's household, and a man of great piety and learning.

JIM CROW.—The Twin Journalists are both equally interested in the *Jaw Hospital.* Their next number must be consulted, and unequivocal references, with names, given *confidentially.*

ERRATA.

P. 745, line 7 from bottom, for *slit* read *slip.*

P. 745, 2d col., line 8, omit the word *hernia.*

P. 745, 2d col., line 12 from bottom, for *drive* read *derive.*

All communications and books for review to be forwarded, carriage paid, to Dr. RYAN, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

THE ROYAL

London Medical and Surgical Journal.

No. XXVI. SATURDAY, FEBRUARY 25. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XI.

Digestion.

Insects which eat nothing---Animals inclosed in blocks of stone---Animals living on their skins---Difference between animal and vegetable food---Advocates of a vegetable diet---Difference between nutritious and digestible food --- Condiments --- Cookery---Raw animal food---Water drinkers---Natural and unnatural use of wine---A man killed by Cheshire cheese---Abernethy's rule for eating---Cases of abstinence from three to fifty years---Ancient and modern opinions on the use of the bile---Use of colour in the fæces---Use of the pancreatic juice---Diseased livers in drunkards and crammed geese---Action of spices and liquors---Vital and ordinary chemistry ---Sweet and bitter bile---Passage of food through the intestines---Relative length of the duodenum, jejunum, and ileum---Fæcification---Follicles in the large intestines---Cæcum and appendix vermiformis---Rectum---Examples of constipation, from a month to seven years---Use of the omentum---Gases secreted in the intestinal canal---Generation---Structure and attachment of the placenta---Membranes of the fœtus, and of the umbilical cord---Decidua, decidua reflexa, chorion, amnion, allantois, and vesicula erythroides---Acid of the allantois, and alkali of the amnion---Structure and development of the egg of birds---Relative frequency of twins, triplets, and quadruplets---Case of five children at a birth---Case of three hundred and sixty-five---Superfœtation---Size of the fœtus from three weeks to nine months---Order in which the parts of the body are developed---Progressive development of the heart, brain, and stomach---Formation of monsters.

Insects, during their metamorphosis, eat nothing. Snails, beetles, spiders, toads, frogs, and serpents, and it is said even bats (which are *warm*-blooded animals) have been found in solid blocks of stone. Greenham said that toads, in these circumstances, subsist by eating their skins, which are thrown off periodically; but that is very unlikely. If, however, while inclosed in the stone, their *diet* is spare, so are their *secretions;* and there is no reason, *à priori*, why an animal without secretions and excretions might not live on to an indefinite period. Gassendi, Rousseau, and Newton, have said that man is intended by nature to eat vegetables only. But those who maintain such opinions, seldom *practise* what they *teach.* The philosopher oftener sinks into the man, than the man rises into the philosopher. Some tribes live wholly on vegetable food; but, on the other hand, there are many which live on *animal* food alone. It would not be easy to find stronger men, than many among the Irish and Highlanders; and they eat only potatoes and oatmeal. But the earliest historical records prove, that *animal* food was eaten as anciently as *vegetable.* Generally speaking, animal substances are more nutritious than vegetable; but those vegetables which contain *most* of their nutritious principles, are more nutritious than that kind of animal food

which contains *little* of its nutritious principles. The nutritious property of food, is in the inverse ratio of its digestibility. Sir Astley Cooper found that tendon (which is almost wholly composed of gelatine) is digested with difficulty, and that *boiled* meat is more digestible than *roasted;* some of its gelatine being abstracted in the former process.

Condiments consist of salts or spices; and act by stimulating the stomach to secretion. Probably they counteract the tendency to the acetous and putrefactive fermentation. Cookery lessens the cohesion of food. The oyster is almost the only animal food that is eaten raw. With respect to drink, the cry is, that water is the only natural drink; but the practice of primitive ages contradicts the assertion. Though it is *not* natural for a man to make a beast of himself, it *is* natural for him to enjoy moderately what his intellect has procured, *Sanis omnia sana.* But we attach much too great an importance to the difference in the *kind* of food. Almost every esculent article in the three kingdoms has been at one time lauded, and at another decried. Negroes only thrive for a short time on sugar alone. Stark, of Vienna, killed himself by experiments of this nature. After living on one kind of food alone, and keeping it up till he was just dying of scurvy, he changed it for another, and recovered. At last he died from Cheshire cheese. Sir William Temple introduced the pernicious system of eating "little and often." It is better to let the stomach repose, and the appetite return. Abernethy's rule is perhaps a very good one;---to take an equal quantity of food, at exact intervals of eight hours.

The most remarkable cases are recorded of living, either without eating anything at all, or of taking little beside water. The Philosophical Transactions for 1758, 1773, and 1775, give instances of such abstinence maintained for three, four, and eight years. Royston brings forward a case which lasted *ten* years; De Hilkin, one of *sixteen;* and Steill, one of fifty.

Till the time of Glisson, the gall-ducts were thought to be furnished with valves; which prevented the bile from going *into* the gall-bladder, and allowed it only to pass *from* it. To account for the bile getting into the bladder, they supposed the latter *attracted* it through its coats, as a magnet attracts iron. They thought the chyle went to the liver, where it was divided into blood and bile; the first of which was carried into the circulation by the *vena cava,* which they supposed to arise from the liver; while the bile was attracted into the gall-bladder. Sylvius thought the bile furnished fuel for the animal heat of the body. By Glisson the use of the bile was said to be to stimulate the intestines, and prevent putrefaction. It was then thought that animal heat was produced by the sulphur in the blood being ignited by heat, and being conveyed throughout the body by the blood. Malpighi said, the use of the bile was to "dulcify the chyle." Boerhaave thought that its design was, by its alkaline properties, to neutralize the acid of the digested food, and mix the oils and water it contained. Others said its use was to "colour the stools;" but they forgot to say, in the mean time, what was the use of the *colour.* Fordyce said it was of no use at all.

The pancreatic juice was said to "mollify the bile;" so that the latter seems to "do nothing," and the former to "help it." Blumenbach says the uses of the bile and pancreatic juice are self-evident; but Magendie says, that if they do assist digestion, we know not how they effect it. Everard Home says that the bile is converted into fat; and Prout, that it is designed to albumenize the chyme. Magendie says the *vena portæ* is like a common sewer; and that the liver separates the bad parts of its contents from the rest; for things may be injected into the *vena portæ* without injury, which could not be so injected into others. This is accounted for by the *vena portæ* being a secreting vein; and thus *getting rid* of a part of its contents, without sending it to the heart to be circulated through the system. Magendie's views are corroborated by the diseased livers which are found in persons who live high, and in drunkards, and in geese which are crammed. The common people think that spirituous liquors go at once to the liver. Spices and liquors may act on the liver by diminishing respiration; for experiment proves that less oxygen is consumed after a full meal, than after a moderate one. *Vital* chemistry may perhaps decompose what *ordinary* chemistry cannot. The bile of all those animals which have no gall-bladder, is

always sweet; and if the *hepatic* bile were not sweet, we could not eat the liver of different animals. The *cystic* bile does probably assist digestion, though we know not how; and it is not very essential. Brodie and Mayo found no chyle in the lacteals when the gall-ducts were tied; but Leuret and Lassaigne, and Tiedeman and Gemlin, found no difference from this circumstance; and in jaundice, when no bile gets into the intestines, digestion still goes on. Prout's hypothesis respecting the use of the bile, is founded only on the coincidence, that below the point where the gall-ducts enter, the chyle is found to have more albumen. But the chyme is perfectly changing throughout its course.

Most of the chyle is probably taken up by the lacteals; but some may be conveyed by the *vena portæ* to the liver. In many fishes, the *valvulæ conniventes* must impede the passage of the food; and thus fishes bear abstinence a long while. Perch and other fish are accustomed to take food only once a fortnight. In the intestines the food is not quite liquid, but forms a mass, which is closely embraced by the intestine. The surface of this mass is altered by the mucous secretion of the lining membrane of the intestine, and this surface is partly absorbed. The whole mass of food probably passes through the thirty-six feet of intestine in twenty-four hours, or at the rate of three inches in ten minutes; though in some places it passes faster than in others. If the globe of chyme be three inches in diameter, a layer, of about the thickness of a quarter of a line, will be absorbed in passing through three inches of intestine, or a line in a foot. In the jejunum the absorption is thought to be more rapid than elsewhere, from the lacteals being more abundant. Its propulsion is quicker in that part of the intestine, owing to the latter having a stronger muscular coat. The duodenum is about *one* foot long; the jejunum *twelve* feet; and the ileum *eighteen* feet.

Van Helmont first paid attention to the cœcum; and said that the properties of fæces were owing to a "stercoraceous ferment," secreted by the *appendix vermiformis*. The lithic acid and lithate of ammonia, which are found in the stools of some reptiles and birds, are probably owing to the urine being mixed with the stools. It is very singular that all the strong secretions are follicular; and, offensive as are the secretions from the follicles in the large intestines, it is from similar ones, near the rectum of some animals, civet, ambergris, and other odoriferous substances are obtained. Musk and castor are obtained from glands, which are similar to the *glandulæ odoriferæ* of the prepuce in man.

If Magendie be correct as to the separation of the annular fibres to form the cells of the colon, it is not easy to tell how the contraction of these rings can propel the contents of the intestine. It is said that the presence of the fæces in the *appendix vermiformis* gives rise to inflammation and gangrene. At any rate, in an inflamed *appendix*, fæces have been found. No animals, except man and the ourang outang, have an *appendix vermiformis*, and a cœcum too. It is not likely that the only use of the large intestines is to get rid of the fæces; for, in the rein deer, and a great many other animals, they are very much convoluted—looking like small intestines.

The balls which were given to the man on whom Stein performed his experiments were voided in about forty hours. The rectum may retain some meals, though it has voided others: and there may be costiveness although a stool may be passed once a day; for the rectum may void to-day what it ought to have voided before, and may still retain what it ought to pass. Some persons retain their fæces for a week, which is a very dirty habit. We may accustom the body to a daily discharge, and if the fæces be retained longer than that, the breath and other secretions become impregnated. Examples of constipation are related by Mason Good, varying from a month to seven years. Dr. Crampton gives a case in which it lasted for eight months. Such cases are to be accounted for by little food being taken, and by the matter secreted being again absorbed.

The bile and meconium of the fœtus are quite bland, so that the gall-bladder and the glands of the intestines have not then taken on their characteristic secretions. The omentum was thought, by the old authors, to be for the purpose of keeping the intestines warm; and they tell a story of a gladiator who, having lost part of his omentum in a

contest, ever afterwards felt the contents of his abdomen to be very cold.

The following is an account of the gases secreted in the intestinal canal:—I. In the *stomach*.—1. Oxygen. 2. Hydrogen. 3. Nitrogen. 4. Carbonic acid. II. In the *small* intestines,—1. Hydrogen. 2. Nitrogen. III. In the *large* intestines,—1. Hydrogen. 2. Nitrogen. 3. Carburetted hydrogen. 4. Phosphoretted hydrogen. 5. Sulphuretted hydrogen.

Generation.

The placenta is said to be formed from the *chorion*. It certainly is *attached* to it, just where it is reflected inward to form the *amnion*. Along the umbilical cord, the chorion is *internal*; although in every other situation it is *external*. The membranes which burst at the time of parturition are,—1. The *decidua*. 2. The *decidua reflexa*. 3. The *chorion*. 4. The *amnion*. Besides these, the *allantois* and the *vesicula erythroides* extend along the cord. In quadrupeds, the allantoid extends into the horns of the uterus. The two latter membranes are outside the former. They gradually become shorter, and seem to be pulled into the body of the fœtus, to form the bladder and intestinal canal. The allantoid contains an *acid* fluid, thus differing from the amnios, the fluid of which is *alkaline*. This fact was discovered by Leuret and Lassaigne. The fluid contained in the allantoid was first described as *amniotic acid*, being thought to come from the amnion.

In birds the greater part of the ovum consists of the yolk-bag, which has a spot or *cicatrix* at one point. This answers to the chorion and amnion; and as it grows during the development of the chick, it forms the *vesicula aeris*. The yolk gradually decreases, and the bag is drawn within the body, and is said to form the intestinal canal. Probably it *does* assist in its formation, but it is chiefly absorbed.

If there be more than one fœtus, the *decidua* and the *decidua reflexa* are common to both; but they have each a distinct *chorion*, *amnion*, and *placenta*. Twins are said to occur once in a *hundred* times; triplets once in a *thousand* times; and quadruplets once in a *hundred and fifty thousand* times. A case is given by Erasmus of three hundred and sixty-five infants at a birth; and another of a thousand five hundred and sixty. They were probably hydatids; though the former are said to have been all baptized. Osborne relates a case of five children at a birth; and there is no well-authenticated instance of more than this number.

Superfœtation is supposed to result from a *second* conception taking place so soon after the *first*, that the *decidua* has not yet had time to close the uterus. This is supposed to have been the case with the woman, who bore a white and a black infant, after having had connexion with her husband and a negro slave, immediately after each other. But the following considerations may be adduced on the opposite side. 1. Both these infants may have been the offspring of the negro. 2. The semen may perhaps gain admission to the uterus through an accidental aperture in the *decidua*, and the *inner* surface of the uterus, to the Fallopian tube. 4. The semen may perhaps be absorbed into the blood; and thus effect the impregnation of an ovum. Magendie observes, in reference to this point, that it would be curious to ascertain if we could impregnate a woman, by injecting semen into the veins. 5. The same coitus may fecundate two *ova*; which become developed *successively*.

All *the third week*, the fœtus is about the size of a *flea*; at the *fourth*, about that of a *bug*; at the *fifth*, of a *fly*; and at the *sixth*, of a *bee*. At the *seventh*, it is about *three quarters of an inch* long; and at the *eighth*, an *inch and a half*. At the *third month*, it is about *three* inches long; at the *fourth*, *five inches*; at the *fifth*, *six and a half* inches; at the *sixth*, *eight and a half* inches; at the *seventh*, *eleven* inches; at the *eighth fifteen* inches; and at the *ninth*, *twenty* inches. Its average *weight*, at the last-mentioned period, is seven pounds.

With respect to the order in which the parts of the body are developed, the most ancient opinion was that the *heart* was first formed, and was the seat of *identity*; because in saying *ego*, the lower jaw *descends*, and thus approaches the

heart! Galen thought the *liver* was first formed; as it was supposed to generate the blood. Harvey thought the blood was formed chiefly by its *innate powers*, as possessing vitality; and that immediately afterwards it found the heart, which he called *punctum saliens*. By recent investigation, it is rendered probable, that the *mucous* and *dermoid* tissues are first developed.

It is not till some time after the *ganglionic* system of nerves is formed, that the *cerebro-spinal* system appears. The spinal cord is at first a canal of medullary matter, and becomes filled up from before backward, and from without inward. In the fœtus, the groove is continuous behind with the fourth ventricle; and in birds, reptiles, and fishes, this communication remains always open. The brain is also at first like a deep groove; consisting of the parts which afterwards form the centre of its base. The brain of man resembles, at different periods of its development, the brain of different animals; not so much, however, in *form* (for the brain differs in form in the same order of animals) as in having all the *same parts*. The same analogy may be traced, in the progressive development of the heart and the stomach. These organs seem to be constructed, in all animals, on a similar nucleus; like what is observed in the formation of crystals, more parts being added as the organization advances. If any part be ultimately wanting, it is probably one of those parts which are last formed. Monsters have been thought to set at defiance all the ordinary laws of nature. But Lerres maintains that there is "*order* in *disorder*;" for that order presides over *malformations*, as well as over *natural formations*. He likewise proves from monsters, that the body is formed from without inwards. There may be a perfect *heart* in a monster that is without a *head*; whence it is thought that parts are formed independently of each other, on a separate type; and that they are united, according as their functions require mutual co-operation. In the lower animals the nervous matter is diffused throughout the body, but as organization advances, it is collected into globules, lines, cords, a brain, and the rest of the system.

OBSERVATIONS ON JAUNDICE,

MORE PARTICULARLY ON THAT FORM OF THE DISEASE WHICH ACCOMPANIES THE DIFFUSED INFLAMMATION OF THE SUBSTANCE OF THE LIVER.

By Dr. Bright.

[From Guy's Hospital Reports.]

(*Continued from page* 773.)

Case 4.—*Intense Jaundice, from Inflammatory Action, induced on a previously diseased Liver.*

Elizabeth ———, aged 28, was admitted into the Clinical Ward, Jan. 4, 1832, affected with icterus and hæmoptysis. It appeared that she had been a woman of very irregular habits of life, taking spirits freely. She had borne nine children, and her last confinement occurred fifteen months before admission. She had enjoyed good health till a month before she came into the hospital, and had suckled the child till within three weeks of that time, when she was attacked with pain in her head and limbs, constant sickness, and occasional vomiting of dark blood. From the first, the conjunctiva was remarked to be yellow; and in the course of a week the whole body was deeply jaundiced. The bowels were then relaxed, and the motions of a dark colour. During the last week she had experienced slight cough, with bloody expectoration; and this had increased so much, that since the day before her admission she had coughed up three pints of frothy florid blood. Her skin was of a deep yellow colour all over, with a slight tendency to petechial blotches in the arms. She seemed quite exhausted with the loss of blood, and the lassitude of the disease. Her bowels had not been open for a week, till the day before, when she passed one small light-coloured dejection. Tongue coated with a dark brown fur, but moist: urine high coloured: pulse 104, feeble, with a slight jerk. I was able just to feel the surface of the liver descending below the margin of the ribs on the right side; and by pressing firmly, and drawing my finger along, I could discover that it was rough, though without distinct or separate tubercles. Pressure, thus considerable, gave no pain.

Finding her exhausted as she then was, with the hæmorrhage continuing, and the bowels not sufficiently open, I ordered two drachms of the oleum terebinthinæ every four hours; but the hæmorrhage became so oppressive during the night, that it was necessary to apply cold applications freely to the chest. At the time of the visit next day, her pillow was covered with blood: she had brought up between three and four pints of blood; had also vomited once some grumous matter, evidently blood; and had passed two solid motions of a very dark colour from the admixture of blood, and very offensive. Tongue coated with a dark fur: pulse 120, feeble. She had all the appearance of a person sinking from the loss of blood, with constant most distressing jactitations; and delirious, though faint, exclamations.

It was necessary to give her some brandy; immediately after which she became composed. She was ordered to repeat it frequently, and take the infusion of roses, with an additional quantity of acid. She continued delirious, and sunk in the afternoon of the following day.

Sectio Cadaveris.---The external colour was of a brilliant yellow, and on the arms were a few slight ecchymoses. The adipose matter was deeply stained with jaundice; as was the secretion which flowed from the lactiferous tubes, on cutting through the mammary glands. The pleura was slightly tinged with bile. The lungs were free from tubercles or unnatural deposits; but the posterior part of both, more particularly, however, of the left, was hard, and of a deep-red colour, from a large quantity of blood apparently extravasated in its substance, producing a state approaching to pulmonary apoplexy: the bronchial tubes were greatly stained with blood: and so extremely red, that it was impossible to say whether the blood might have escaped from any part.

The heart was small and healthy, but contained no coagulum in its cavities: indeed the blood, in all parts, was unusually fluid.

The liver was small, and, in the collapsed state of the lungs, did not appear below the margin of the ribs: its surface was rough and variegated: the roughness, just such as I had thought I perceived during life, when I passed my finger pretty firmly over the small part of the abdomen, immediately beneath the margin of the right ribs. The elevated portions of the liver were of a tolerably bright yellow colour, and of a firmer consistence than the depressions, which were of a more purple colour, and flacid or soft to the feel; and in many parts, particularly the left lobe, which was peculiarly thin and dwindled, portions of large vessels were seen running near the surface. In no part were the acini distinctly seen, though best in the more solid yellow portions. A considerable quantity of fluid blood came from the liver, when it was cut. The gall-bladder was contracted and colourless, and contained about half a tea-spoon of thick tenacious mucus tinged with green bile: the mucous lining was rather red. The ducts were all pervious, and healthy, throughout their whole extent; but were very small and contracted, and did not present the least vestige of bile.

The pancreas was healthy, and remarkably bloodless. The stomach contained some dark grumous fluid; and its vessels were distended. Its mucous membrane, particularly towards the cardiac extremity, exhibited numerous little arborescent vessels, which seemed to terminate in minute points upon the surface, suggesting the idea that they might have thrown out blood during life. The whole of the small intestines were distended with flatus, and of a dark blackish-green colour, covered with slimy mucus internally, some of which was obviously tinged with blood; and the membrane appeared either stained, or marked with ecchymosis. The large intestines had nearly the same appearance. The kidneys were healthy in structure, but tinged through their whole texture with bile; and the pelvis of a deep yellow colour, spotted with slight ecchymosis: the bladder empty, and the uterus contracted; and the ovaries of a lengthened form, shewing marks of the escape of Graffian vesicles.

In this case, it would seem as if inflammatory action had been induced upon a liver already partially disorganized by the intemperate habits of the young woman. There was no trace of obstruction in the ducts; and death resulted, apparently, from the condition of the blood, and the consequent hæmor-

rhage, as well as the depressing influence of the bile circulating through the system.

CASE 5.—*Jaundice of a most intense character, without Mechanical Obstructions; and apparently depending on Inflammatory Action in the Liver.*

SARAH ———, aged 28, was admitted into Guy's Hospital, as a surgeon's patient, on the 6th of August. She was a married woman, and had borne two or three children; but had latterly been separated from her husband, and was said to be much addicted to drinking. As she had sores of a very suspicious character, she was ordered to take sarsaparilla three times a-day, with five grains of the compound ipecacuanha powder, and of the Plummer's pill every night, which she continued for a considerable time. On the 13th of November I was requested to take charge of her, as she was apparently very ill; had been complaining of abdominal pain for the last week; and during the last two days had become jaundiced. I found the bowels rather confined: urine tinged with bile: pulse moderate, but quick: slight tenderness at the pit of the stomach.

Applicentur Cucurbitulæ Cruentæ regioni hepatis, et detrahatur sanguis ad ℥xiv.
Foveatur abdomen.—Habeat Hydrarg. c Cretâ gr. v. statim; et Olei Ricini ℥ss. post horas quatuor; et rep. ad alvi solutionem.

14. There is still some tenderness on pressure at the pit of the stomach, and accelerated pulse.

Applicentur Hirudines quindecim scrobiculo cordis.
Rep. Hydr. c Cretâ et Ol. Ricini.

The yellowness increased: the stools continued of a pale clay colour: the tenderness of the upper part of the abdomen continued.

It is unnecessary to give a detail of all the daily symptoms. Cupping, mercurial purges, and blue pill, with fomentations, were continued; and during ten days no very remarkable change occurred.

24. Slight tenderness over the whole abdomen: colour very intense: pulse 96, small, and rather sharp: respiration 27: bowels confined: thirst: occasional sickness: and occasional pains in the abdomen much relieved by the fomentation.

28. She generally prefers the sitting posture in bed. Lips dry: tongue moist and red: some sluggishness in her mode of speech, and a plaintive tone: pulse 88: no sickness: six or seven loose dejections.

Applicentur Hirudines duodecim scrob. cord. Cataplasm. Lini abdomini.

29. One copious lumpy white stool. Pulse 96: slight tenderness of pit of stomach: respiration tranquil: tongue moist, but more red at the edges.

Dec. 1. Her pupils are rather dilated: her mode of utterance is dull and indistinct: complains of loss of power in the left hand: the right is already disabled by disease.

2. Is lying on her right side, drowsy, with her legs drawn up, moving her left hand with a kind of jactitation, often raising it to her head: she is capable of being so far roused as to put out her tongue when pressed to do so. Tongue moist, and red at the edges: the pupils are dilated.

Applicetur Emplast. Cantharidis vertici.
Enema Catharticum.

3. Yesterday evening she was screaming loudly, with her tongue protruded beyond her teeth. To-day she is in a state of perfect coma, with the eyes turned up. She is incapable of being roused, and has taken no nourishment or medicine since yesterday.

She died the following day.

SECTIO CADAVERIS.—The colour of the whole body of the brightest yellow which jaundice yields. Not less than an inch of adipose matter over the whole abdomen. On removing the calvaria, the dura matter was found tinged of a brilliant yellow colour, and very vascular: raising this, the surface of the brain shewed the vessels loaded with blood; and beneath the arachnoid, in the convolutions, lay a small quantity of serum, probably not more than natural, of a decidedly yellow colour.

As the brain was sliced away, numerous points of fluid blood appeared; and from many of them, the serum which issued with the blood was of a bright camboge yellow, presenting points of that colour mingled with red points. The whole of the vessels, and the sinuses of the brain, were unusually loaded with blood: the ventricles unnaturally dry: the vessels at the base of the brain healthy. Lungs healthy: but the pleuræ preternaturally dry: scarcely could one drop of serum be discovered. The heart healthy. The pulmonary and other vessels deeply tinged with bile. The peritoneum, also, was peculiarly dry. The omentum beautifully spread over the viscera. The colon, when the omentum was turned back, was seen contracted, and very yellow; while the portion of the omentum, closely attached, was spotted with ecchymosis, and loaded with fat.

The liver weighed only two pounds five ounces. It was soft or flaccid to the touch; quite free from any mark of peritoneal inflammation. Its external appearance was mottled dark-red liver-colour, with yellow stone-colour. The acini were pretty distinctly to be traced throughout—red at their centres, and yellow in their circumferences; and in most parts the yellow bore a large proportion to the whole. The gall-bladder was contracted; and contained about half a drachm of mucus, very slightly tinged with green. The ducts were all pervious and healthy, and were not even stained with bile. Pancreas quite healthy: spleen large: kidneys remarkably lobulated, and tinged throughout with bile, particularly the membrane lining the pelvis: ovaries, externally, very yellow: uterus also yellow, with some ecchymosis in its fundus.

In this case, there was not the slightest evidence of obstruction to the passage of the bile, nor was there any trace of it in the liver. The bile must have been rapidly absorbed into the system, almost at the moment of its formation; and its profuse mixture with the blood seems to have acted as a poison, and been the immediate cause of death I am inclined to consider this as the result of a decidedly inflammatory state of the organ. It was one of the first cases which called my attention particularly to this subject: and wherever I have since met with cases which have appeared to me to approach to this, I have combined antimonials, pretty generally and freely, with the mercury and a certain quantity of opium, with much apparent advantage.

Case 6.—*Intense Jaundice, without Mechanical Obstruction, and apparently depending upon Inflammatory Action in the substance of the Liver.*

Keatrina Pfifrein, aged 18, was admitted into the Clinical ward, Jan. 11, 1832, labouring under icterus. She was an assistant to a German broom-maker, and was unable to speak any English. The skin was of a brilliant yellow, and the cheeks, which were flushed, were of the colour of a very ripe apricot; she appeared exhausted, and though she answered questions pretty readily, we were cautioned, by a woman who brought her, that her replies were incorrect. Pulse 120, very small and weak; feet and body very cold. We learnt, that when she came to London, about a fortnight ago, she had been already unwell about a fortnight; and her skin had a decidedly yellow tinge, which had daily increased, attended with an inactivity amounting almost to torpor; so that when removed from her bed, and placed by the fire, which was all she could bear of late, she sat constantly in a kind of dose. We were told that her bowels had been relaxed, without much abdominal pain; and she had not suffered from sickness. She had complained but little of headache; the tongue moist, and slightly furred; the papillæ prominent.

She was ordered a moderate dose of hyd. c̄ creta three times a day, and light nourishment and warmth; and should it not prove, as had been stated, that her bowels were relaxed, she was to take some colocynth pills at night.

12. She was sick yesterday evening, vomiting a good deal. She lay in a perfectly torpid state the whole night, apparently suffering no pain; but towards the morning became delirious, so that it was with difficulty she could be restrained in her bed. At the time of the visit she was very restless, and seemed to suffer pain, but was unable to answer any questions; indeed, except that she swallowed what was given to her, she seemed scarcely conscious; and it was quite uncertain whether pressure on the abdomen gave her any pain. The pupils were dilated; the bowels had not been open, although she had taken two compound colocynth pills;

pulse 106, thrilling, and compressible; tongue moist, and clean.

She was ordered two grains of calomel every two hours, and the ammonia julep every four hours, besides wine, if she became more depressed. Her head was shaved, and a blister applied over the liver; mustard poultices to the feet; and camphor mixture was to be given freely, in case the delirium should return. Injections were to be repeated till the bowels acted freely.

During the night, the purging injections, with colocynth and castor oil, were administered three times. She lay completely comatose the whole night; the pulse sometimes at 140, and extremely weak when not raised by stimulants. No dejection having been passed at ten o'clock in the morning, another colocynth injection was administered, which produced copious, rather dark, unhealthy, feculent motions, mixed with some sanguinolent fluid; and there was likewise an appearance like pus. The blister discharged very abundantly; the urine passed involuntarily, and in considerable quantity; mouth and lips covered with sordes; pulse 120, weak.

Applicetur Emplast. Cantharidis vertici.

Rep. Hydr. Submuriat.

She continued to sink during the day, and died at ten o'clock in the evening.

Sectio Cadaveris.—The whole external surface of a deep yellow colour; the adipose matter was also yellow, as were the cartilages of the ribs.

The lungs wers healthy, but the posterior portions gorged with blood, probably the result of her having been lying for two days on her back. The pleura of the lung of a slight yellow tinge; the heart healthy.

The whole of the abdominal viscera, when first exposed to view, were remarkably tinged with bile; the stomach of a vivid yellow; the intestines looked green; the liver was unusually small, and, for the most part, of a brightish yellow colour, with portions marked with purple or deep brown; and in parts, a finely spotted appearance was yielded by the acini. On cutting into the liver, the same yellow colour, with fine dark spots, pervaded it. The gall-bladder was very small and collapsed, and contained less than a tea-spoonful of thick ropy mucus, of a bright green colour. The cystic duct appeared to be quite contracted, so that neither could a fine probe, nor the point of a scissors, be carried along it more than two-thirds of its length upwards; nor could the tenacious mucus of the gall-bladder be forced down it. However, there was no appearance of thickening, or of morbid deposit, either within or around the duct, which, when laid open with the scalpel, presented the corrugated valvular appearance peculiar to that part of the duct. The lower part of the cystic duct, as well as the whole of the hepatic duct, and the common duct, quite into the duodenum, were pervious, and not at all thickened nor diminished from the natural calibre. There was no trace of bile in either of the ducts; and, following the hepatic ducts quite into the substance of the liver, no bile was detected, but on squeezing the liver, the small secondary and tertiary subdivisions of the ducts were seen filled with tenacious mucus, of an exceedingly faint lemon-yellow colour.

The mucous membrane of the alimentary canal was perfectly healthy, but the contents were very unnatural. In some parts of the ileum and jejunum there was yellow mucus; in others, an olive-green mucous excrement; and in the colon, a drab coloured and gray mass, characteristic of that which usually composes the fæces of jaundiced patients.

The spleen soft; pancreas healthy; kidneys tinged throughout with bile; bladder somewhat distended, rising to view above the pubis, and containing, probably, a pint of clear yellow urine.

The thoracic duct was quite empty; the arteries deeply tinged with bile.

The dura mater was of a brilliant yellow colour; the arachnoid not vascular, and quite untinged with bile; there was no unnatural effusion of serum beneath it, but the small quantity which collected in a few of the sulci was very slightly tinged with yellow, as were the few drops which collected in the base of the skull, when the brain was removed. When slices of the brain were taken horizontally, a moderate number of cut vessels were seen. Many of the small points of blood gave a stain of beautifully yellow bile around them, and some points gave out the yellow serum, without any blood appearing.

The ventricles contained an unusually small quantity of serum, and that was not tinged with bile. The quantity of serum throughout the whole brain was

decidedly deficient. There was no structural lesion nor irregularity in the brain.

In this case, as in the last, no obstruction could be discovered, in the ducts, which could have prevented the flow of bile from the liver; but some traces of the secretion were found in the smaller biliary ducts.

The immediate cause of death, in this case, as in the last, was the poisonous influence of the bile on the system; and in both of these cases the bile was observed, in the blood circulating through the brain more plainly than is usually the case in ordinary jaundice, shewing the degree to which it had impregnated that fluid. Indeed, they present instances as strong as I have ever met with of the deleterious action of the bile, unattended by any of those circumstances connected with the deficient digestion and assimilation of the food, which mark the protracted approach of death when the bile is retained by mechanical causes.

Case 7.—*Extensive Suppuration of the Liver, with Calculi in the Gall-bladder, not producing Obstruction to the Flow of the Bile.*

December 22, 1835.—I was requested by Mr. Clewin Griffith to see a lady who was labouring under jaundice. I found her about 61 years of age, very bulky, prostrate in her bed; her skin universally, but slightly, jaundiced; pulse 130, sharp and weak; skin hot, but the palms of the hands were moist; cheeks flushed; stools well coloured with bile; urine tolerably light in colour. Though the fatness of the abdomen rendered examination rather difficult, I could detect no enlargement of the liver, but considerable tenderness on pressure. I learnt that the first attack of jaundice had occurred twenty years ago, and that within the last fourteen years she had suffered eight or ten attacks, almost always ascribable to indiscretions in diet or exposure. Her attacks varied in severity, but were generally removed by a few doses of blue pill and salts. In the course of the last two years they had sometimes been accompanied with rigors, which was a new feature in the complaint. She had latterly been increasing in bulk. A fortnight before she had eaten something indigestible, and had gone to the play. She thought, by her symptoms, that she had taken a severe cold; but she became completely jaundiced. For a day or two the stools were light-coloured, and for several days the urine was tinged with bile. For the last week she had experienced rigors, generally about once in twenty-four hours, but quite irregularly. The shivering lasted about half an hour, and sometimes going off by a gentle perspiration.

The symptoms which now presented themselves, at once led to the conclusion, that either the liver was inflamed, or that gall-stones were passing along the ducts. The imperfect and variable character of the jaundice, but more particularly the presence of bile in the alvine evacuations, and the general febrile state, inclined us to the belief, that the liver was inflamed, and possibly, should the rigors depend upon that, suppuration had taken place: on the other hand, there were many circumstances, in the long history of the disease, which favoured the idea that gall-stones had passed. As there was no doubt of the inflammatory state of disease now existing, and she was far too much depressed to venture on general depletion, we ordered twenty leeches to be applied to the region of the liver; followed by a poultice, which was to be constantly kept upon the part; while she was to take a grain of calomel, with half a grain of opium, and a quarter of a grain of tartarized antimony, every six hours.

Dec. 23. She had passed a quiet night; but her mind had wandered: pulse 110: two stools well supplied with bile. She was ordered to repeat her remedies.

25. Tongue more brown and furred: pulse 110: skin more deeply jaundiced: two stools to-day, well supplied with bile. No pain whatever, except when pressure is made over one particular point of the liver: abdomen soft: she is rather drowsy, but easily aroused.

She was now ordered a diaphoretic mixture; and was to take five grains of antimonial powder, at night; continuing the fomentations and poultices, and light nourishment.

27. Not so well in the evening: wandering a good deal in her mind.

Jan. 1. On the whole, the symptoms have appeared, during the last three days, to improve; but yesterday she had a return, for a short time, of the rigors, and she is more jaundiced: stools

loaded with bile, and, though for three days she has taken no mercury, contain much green flaky matter: urine rather scanty: pulse 118, softer: tongue less dry, and furred: she is inclined to be drowsy, but is easily roused, and answers questions very clearly: no delirium. She has taken, for the last forty-eight hours, a little antimonial wine, with nitrate of potash, in a draught, with cinnamon-water.

She lay, with little alteration, for some days; becoming, however, more drowsy and deaf; taking small doses of hydrarg. c cretâ and the decoction of taraxicum, and light farinaceous nourishment, with beef-tea. On the 5th, she became gradually almost unconscious of any thing around her, but lay without pain; and when roused, denied all pain, unless pressure were made at the pit of the stomach, when she said she felt a little uneasiness.

In the evening of the 10th, a convulsive seizure occurred; from which time she seemed to have no knowledge of surrounding objects, but lay almost motionless, and the jaundice seemed to increase. I saw her last on the evening of the 12th: she lay sunk on a water-bed, moving her legs frequently; and she took, without apparent consciousness, a spoonful or two of jelly. In the night, she died.

Sectio Cadaveris.---The abdomen only was examined. The whole abdomen was covered with at least two inches of adeps. The omentum, the appendices epiploïcæ, and the kidneys, were all loaded with fat. The liver was small, but the gall-bladder of considerable size. The liver adhered by a very few old adhesions to the diaphragm, which rendered some force necessary to remove the organ; and during this, a stream of pus issued from its upper surface. On making sections, it was found that the whole liver was studded with abscesses, apparently of different ages---certainly not fewer than a hundred---from the size of a pea to that of an egg; some containing pus; others filled by a slough; and some surrounded by firm parietes, forming cysts. The vena portæ was blocked up by a very firm fibrinous coagulum closely adherent, and the vein beyond the coagulum was unhealthy and inflamed: we did not trace as carefully as would have been desirable, the ramifications of the portal vein. The gall-bladder contained no bile, but was partially distended with mucus, and a little pus: its parietes were in a state of ulceration, and it contained ten moderate-sized angular concretions. In the appendices of the uterus we found some peculiar putty-like concretions, which were examined by Mr. Rees. (See Appendix, p. 656.)

In this case we have very general inflammation of the substance of the liver, attended with jaundice; and, though connected with the presence of gall-stones, it was far from being a common case of jaundice, from the obstruction of the bile by mechanical causes; for, from the beginning to the end of the present attack, there was no deficiency of bile in the evacuations: it passed freely down the common duct, though the cystic duct was probably obstructed. The absence of any material pain, or even of much tenderness on pressure, shews to what an extent inflammatory action may be going on in the liver without that symptom, provided the peritoneum is not acutely inflamed. It is probable, from the appearance of the liver, that, in many of the previous attacks of jaundice, inflammatory action had existed, and had even involved the peritoneum, whatever share the gall-stones may be supposed to have contributed towards that effect. The state of the vena portæ struck us forcibly: and although we neglected to trace it into its subdivisions, yet the appearance of the portion we saw, in conjunction with the case I shall immediately relate, and which occurred to me within a few days of the same time, leads me to believe that the same connection existed between the abscesses and that vessel in one case, which was so plainly observed in the other. The ulceration which had taken place extensively in the gall-bladder may have modified the symptoms in some degree; and the situation of the single spot where pain was felt on pressure makes me think that the gall-bladder was by far the most sensitive of the diseased parts. It was within a very few weeks of the occurrence of this case that I was called to see, with Dr. James Johnson, a case which he has published, and in which the gall-bladder was still more extensively ulcerated than in this; where, indeed, it was distended with pus and biliary concretions; and, led by certain

analogies which I supposed were to be traced between this case and the two which had so lately occurred, I was induced to conjecture that this might be a state of suppurative inflammation of the liver with gall-stones. Suppuration had not, however, as afterwards appeared, taken place in the liver, except as the abscess of the gall-bladder began to encroach on the neighbouring parts of the organ: of biliary concretions there were abundance.

The acute local tenderness was present; and the chief symptom decidedly different was the absence of jaundice beyond that bilious tinge which so generally accompanies derangements of the liver, even when they are slight; and this symptom had, I was informed, been more conspicuous at the commencement of the attack.

Case 8.---*Extensive Suppuration of the Liver, discharging itself into the Portal Veins.—Jaundice slight: no Gall-stones.*

George Turner, aged 47, was admitted into Guy's Hospital, Jan. 6, 1836. He was by trade a tailor; and was residing in Liecestershire about ten months before; when, from exposure to cold and damp, after working in a hot room, he experienced a rigor, which was followed by heat, lasting altogether only a few minutes. Before that time he had enjoyed good health; but for a short time previously had suffered from pain in the right side, which increased much from that time, and extended into the shoulders. The paroxysms returned; but continued mild for a month, and did not prevent his working. At the expiration of a month, however, they became more severe, and the pain in the side also increased. Hitherto they had observed no particular periods; but at the time of admission they generally came on at the hours of eleven in the forenoon, and four in the afternoon; and were generally preceded by a violent cough, unattended by expectoration. He likewise, frequently, had a rigor when he awoke out of his sleep. He had never been completely jaundiced; but had now a very sallow complexion, with a decided yellow tinge; and the conjunctiva tinged with bile, while the countenance was peculiarly anxious and dejected: tongue covered with a yellowish-brown fur in the centre, and a whitish fur at the edges. He complained of pain in the upper part of the abdomen, and also in the loins. The slightest pressure on the region of the liver gave him considerable pain: pulse irregularly intermittent, and jerking: some headache. There seemed scarcely any room to doubt that the liver was, in this case, the seat of inflammatory disease.

Applicentur Cucurbitulæ Cruentæ lateri dextro, et detrahatur sanguis ad uncias duodecim.
Habeat Pilul. Hydrag. gr. i. Ext. Hyoscy. gr. iij. ter die.
Mist. Magnes. sextâ quâque horâ.

7. Bowels once relieved: urine scanty and dark-coloured, not albuminous: less pain and tenderness in the region of the liver. He had a rigor last night at nine o'clock. The posterior part of the right side of the chest is very dull; and the respiration, bronchial and distant. The heart's action is indistinct and tumultuous: the conjunctiva and countenance tinged with bile.

Rep. Cucurb. Cruent. ad uncias decem.
Adde Hydr. Submuriat. gr. i. sing. pilulis.
Rep. Mistura.

8. A rigor occurred at half-past nine P.M. yesterday, and at half-past five A.M. to-day: bowels open twice; evacuations scanty, bilious, and containing blood: tongue thickly encrusted: pulse fuller, and intermittent: urine very scanty, and turbid: pressure on the right side causes less pain.

Habeat Enema ex Avenæ Decoct. Sodæ Carb. Gr. xv. ex. Infus. Menth.; et Pergat.

9. The injection brought away a considerable quantity of blood with the stool, but gave him the greatest relief: he has hæmorrhoids. Between seven and eight P.M. yesterday, the paroxysm appeared to be coming on; but was checked by keeping him warm: one small motion, containing blood and feculent matter mixed: pulse sharp, and irregularly intermittent: the tongue is covered with a thick dry incrustation: skin hot, and dry.

Pergat; et rep. Inject.

Vespere.—Tongue thickly encrusted: pulse very quick, irregular, and compressed by the slightest touch: legs drawn up on the abdomen: skin hot, and dry.

Brandy and Soda Water, and Ammonia.

10. Better: pulse of more power: tongue moist at the edges: one small motion, without blood: slept but little: still complains of great tenderness over the liver: considerable swelling and inflammation of the parotid gland.

Applicetur Cataplasm.; et capiat Liq. Opii. sed. m xv. h. s.—Pergat.

11. The paroxysm came on at eleven A.M.: pulse 120, sharp, regular, and easily compressed: one small motion, without blood: tongue dry in the centre, but moist at the edges: urine less turbid: countenance less yellow: decidedly less tenderness over the region of the liver: slept a little in the night.

Hirud. viij. tumori faciei.
Ext. Hyos. gr. v. o. n.
Omitte Pil.; et pergat.

Vespere.—Pulse 165; respiration 45; the right pupil contracted; the left dilated; tongue very dry.

Brandy and Ammonia.

12. Improved; slept well in the night; bowels well opened; passed, by stool, a small quantity of blood, and has also discharged some from the mouth; had a rigor at twelve, which lasted half an hour; pulse small, and feeble. He sunk gradually, and died at twelve o'clock the following day.

Sectio Cadaveris.—The skin was universally jaundiced, of a light colour; body by no means emaciated. The lung on the right side was pushed up by the liver, which rose as high as the fourth rib, but the lung itself was perfectly healthy. The liver was decidedly large, and adhered pretty generally to the parietes, and, on its concave surface, to the different viscera on which it rested. Some parts of the substance of the liver appeared healthy, but the whole of the right lobe was pervaded by numerous abscesses, so much so that a section through the thick part divided at least thirty, chiefly filled with yellow and tolerably healthy pus. Many of them were contained in cysts not unlike, in texture, the parietes of a suppurating tubercle in the lungs. At the thin margin of the right lobe, one of these abscesses shewed itself externally, presenting an irregular gangrenous patch, of the size of a half-crown, and, when cut into, proved a sloughing abscess; but the peculiarity of all this extensive suppuration was, that it seemed to implicate most generally the system of the portal vein, for throughout we cut into large trunks of this vessel filled with pus, and apparently in free communication with the abscesses, both large and small, so that it was very difficult to say, from the inspection of the parts, whether the mischief began in the veins or was communicated to them. The veins themselves, however, were in a state of suppuration; they were thickened, and their surfaces appeared imbued with suppuration, like the walls of one of the abscesses. The veins going to the cava were quite healthy, and contained blood of natural appearance. The large ducts of the liver were also healthy, and the gall-bladder contained a full ounce of light-coloured bile. The diaphragm, where it had been in contact with the liver, was beginning to be implicated in the suppuration, and the mark was visible through its whole thickness, discolouring the pleura.

The abscesses of the liver, in this case, bore the most exact resemblance to those in the last; and as there were no biliary concretions, it would appear that they are not necessary precursors of that state of suppuration, although they may be the casual exciting cause. The greater tenderness, on pressure, is accounted for by the more extensive manner in which the peritoneum of the liver was involved.

How far these two last cases may be considered allied to the slighter and to the more acute attacks of jaundice which I have related, may possibly be matter of doubt; but, upon the whole, I think there is sufficient ground for classing them as varieties of the same disease, the peculiarities of each depending, in some degree, upon the severity of the original inflammation, and partly on the age and constitution of the patient; and in this view the eight cases which I

have now detailed may be considered as forming a kind of series of what may be called inflammatory, or perhaps idiopathic, jaundice. The two first illustrate the mild and easily-curable form of the disease; the third is a case of well-marked inflammatory action, mild, probably, at its commencement, but rendered incurable by neglect. The three which follow illustrate the most intense form of the disease, and the two concluding cases shew the termination of inflammatory action in extensive suppuration.

OBSTETRIC APHORISMS,

By M. Ryan, M.D. &c. &c.

[Continued from page 769.]

APPLICATION OF THE LEVER OR VECTIS.

This instrument is used in the same cases as the long and short forceps. It bears a strong resemblance to one blade of the forceps. In all cases the instrument ought to be passed along the head and face, as far as, or over the chin or head of the infant.

When the labour pain returns, the handle of the instrument must be raised gently but firmly towards the pubes, and extracting force employed at the same time.

Some advise the operator to rest the vectis on the symphysis pubis, or upon the ramus of the ischium as a fulcrum, and thus to compress the soft parts of the woman. But by passing the palm of the hand on the back of the blade of the instrument when in action, the hand will form a fulcrum, and the pressure on the soft parts of the woman will be greatly diminished. The vectis may be passed over the face and chin when in the cavity of the sacrum, and traction made towards the pubes which will expedite delivery.

The vectis or lever is a very inferior instrument to the forceps, and is now very little employed, though some practitioners prefer it.

The Blunt Hook. This instrument is employed in breech cases in which it may be placed over the hips, or under the arms in natural labour. It is also useful after craniotomy and evisceration of the infant.

The Fillets.—Bands of different sorts are sometimes applied over the wrist, ankle, arm, leg, and round the thighs in breech cases to assist in extracting the infant. This contrivance is rarely used in this country. A silk handkerchief has been passed over one hip and between the thighs in breech cases, and traction made by means of it. A ribbon or small bandage is passed by continental obstetricians round the arm or leg, when either of those parts present.

INCISIVE OBSTETRIC OPERATIONS.

The incisive Obstetric Operations are as follows.

1. *Embryotomy, or embryulcia,* dismemberment of the infantine body. This consists in craniotomy, cephalotomy, or perforation of the head, evacuation of the brain, and breaking the cranial bones into pieces, and in perforation of the chest, evisceration of its contents, and incision of different parts of the body, as decollation, detruncation, &c.

2. *Gastro hysterotomy. Cæsarean section.* Incision of the abdomen and uterus, in the course of the linea alba is performed to extract the infant, when the brim, cavity, or outlet of the pelvis is so contracted or deformed, that the dismembered infant cannot be removed through it even by embryotomy. There is another modification of this operation termed *vaginal hysterotomy* which consists in making an incision through the vagina and uterus.

The first successful case performed in this country, was by an illiterate poor midwife, named Mary Dunally, with a razor, in the county of Tyrone, in Ireland, *(Edinburgh Medical Essays, vol.* 1,) and the second by Mr. Barlow, at Blackburn, in Lancashire.

The latter operation is required when the uterine orifice is scirrhous or nearly impervious, when there are certain obliquities of the uterus, and when there is extra uterine fœtation.

3. *Gastrotomy* is performed in extra-uterine pregnancy, or when there is rupture of the uterus, and the fœtus has escaped into the cavity of the abdomen, and cannot be extracted through the natural passages. This operation was lately performed by Mr. Hutchinson, of Farringdon-street, with success, so far as the woman was concerned, in a case of extra-uterine pregnancy of fourteen months duration.

4. *Symphyseotomy section of the Symphysis Pubis. Sigaultian operation.*—When the pelvis is very much contracted,

but not so much as to require craniotomy or gastro-hysterotomy, some continental obstetrician divide the symphysis pubis with a scalpel or saw, with a view of enlarging the cavity of the pelvis. They then apply the forceps, or perform version, as the case may be. The result of forcibly separating the pubic bones in this manner will be, the luxation of the sacro-iliac joints, severe pains in these joints, inability to stand or walk for several months, or for the remainder of life. For these reasons the operation is not performed in this country.

Induction of Premature Labour.—This operation is required when the pelvis is so deformed that an infant may be born at the seventh month and a half, which should be extracted by embryotomy at the full term of pregnancy. The operation is performed to save the life of the infant, and not to destroy it as in criminal abortion. It is also advised by Dr. Ashwell in diseases of the ovary, when the organ is very painful and rapidly enlarging on account of the determination of blood to the gravid uterus, during pregnancy.

The operation is performed as follows, and lest it be resorted to for improper purposes I shall describe it in one of the learned languages:—Circa orificium uteri separantur membranæ digito indico ad pollicis spatium, et detur dosis secalis cornuti vel ergotæ more solito ad partum accelerandum. Si, post dies tres, non accideret partus, dein aperiantur, instrumento aliquo acuto, membranæ uteri.

1. *Craniotomy* is required when the bones of the female pelvis are so deformed, that the transverse admeasurement from hip to hip only measures three inches, and the antero-posterior or sacro-pubic measures only two inches and a half, for in such case the pelvis is too narrow to admit of the extraction of the infant with the forceps or by version. The operation is also necessary, when the head is so jammed or impacted in a natural pelvis that it cannot be extracted with the forceps or lever, or by version.

Operation.—The operator passes two fingers of the left hand to the head of the infant, and feels the fontanelles or openings of the head, and then passes the perforator along his fingers and into the anterior or posterior fontanelle, or through some one of the sutures into the brain, as there is great difficulty in perforating the centre, which is the most ossified part of the bones of the cranium. The perforator ought to be introduced to the rests or shoulders of the instrument, with a semi-rotatory motion, then its handle seperated, the fingers protecting the uterus from its cutting edges. The instrument ought to be closed, then opened in a transverse direction, so as to form a crucial incision. It is then closed and passed through the brain, then opened in different directions within the cranium, and finally closed and withdrawn along the fingers.

The opening thus made admits the brain to be rapidly expelled during labour pains, the size of the head is diminished, all injurious pressure made by it on the rectum, bladder, or linings of the pelvis is removed, and the infant is sooner or later expelled, when the pelvis is natural, by the parturient efforts when they return or are excited by the ergota. When uterine action does not expel the infant after a few hours, the forceps, lever, craniotomy forceps, crotchet or blunt hook may be employed to make traction, and this should always be in the course of the axes of the brain, cavity or outlet of the pelvis, according to the position of the head of the infant. But when the pelvis is deformed, it will be necessary to reduce the size of the cranium with the osteotome or the craniotomy forceps. In such cases, the scalp ought to be separated from the bones by introducing the fingers through the opening when the head is within reach, and one jaw of the craniotomy forceps passed within the head, and the other beneath the scalp over the bone. The instrument is now put in action, and a larger or smaller piece of bone is broken, which ought to be extracted along the fingers and palm of the left hand, so as not to injure the soft parts within the pelvis.

It may be necessary to break down the calvarium or upper part of the skull, and for this purpose to introduce the craniotomy forceps a great many times, always taking the greatest care not to injure the woman. This part of the operation may require an hour or two; but simple perforation of the head can be accomplished in a few minutes.

When the head is considerably reduced in size, and does not pass in three or four hours after cephalotomy, the scalp and some of the remaining bones are to be seized with the craniotomy forceps and traction made in the proper axis of the pelvis, or in that curved line on which the uterus expels the infant in natural labour.

The craniotomy forceps is far superior

to the crotchet or blunt hook, and much less likely to injure the soft parts of the woman. The crotchet or blunt hook is applied over the petrous portion of the temporal bone, the mastoid process, occiput forehead, lower jaw, or in the occipatal foramen or orbit.

When traction is attempted either instrument may slip, and injure or lacerate the uterus or other soft parts within the pelvis.

The strength of the patient ought to be supported when necessary, and wine or some spirit and warm water ought to be exhibited, more or less time allowed for rest, and an opiate given.

In cases of great deformity of the pelvis, it may be necessary to break down the base of the skull in the manner already mentioned, or to use the osteotomes of D. Davis, and Holmes, the cephalatribe of Boudelocque, neveu, which overcomes all difficulties relative to the size of the head, and is said to render the perforator, craniotomy forceps, and crotchets, superfluous. The terebellum of Duges is capable of perforating the cranial bones, and breaking down the base of the skull. This last operation is termed, cephalatripsy, and will often supersede symphyseotomy, and gastro-hysterotomy.

When the pelvis is greatly deformed, The body of the infant must be dismembered with the perforator, craniotomy forceps, crotchet, blunt hook, osteotome, &c., and in such cases the instruments must be introduced so often that the soft parts are liable to be injured,so that there is as much danger to the woman as by gastro-hysterotomy; and this fact leads continental obstetricians to prefer the latter operation.

When the infant presents by the feet, and the body is expelled, the head may remain in the uterus; and if it cannot be extracted with hand in the manner described in breech cases, or with the forceps, it must be perforated and reduced in size.

In such cases an assistant should press on the abdomen and fix the head, unless it is already impacted and immoveable, while the operator introduces the perforator and craniotomises in the manner already described.

So soon as the head begins to descend or arrives at the outlet, the body of the infant should be supported on the left arm, the fore-finger of the left hand passed into the mouth to depress the chin on the chest, the fore and middle finger of the right hand placed on each side of the neck, and traction made during a pain from the sacrum towards the pubes, the left hand supporting the perineum, so that the back of the infant may be brought in contact with the abdomen of the mother.

When the infant's head is left in the uterus, it should be adapted with the hand to the largest diameter of the pelvis, or if this cannot be done, it is to be extracted with the forceps or by craniotomy.

When the neck of the infant presents, and version cannot be effected, a blunt hook or crotchet may be applied over the neck, and the head separated from the body, or this may be done with a scalpel when the neck is close to the external genital aperture.

As soon as the head is detached, the neck and shoulder or arm may be easily extracted, the body and head follow, and the secundines may be expelled, or managed as in third stage of natural labour.

When the ribs present, and version cannot be effected, the perforator may be introduced between them into the chest, the ribs broken with the craniotomy forceps or osteotome and extracted, the thoracic and abdominal viscera removed, the blunt hook or crotchet fixed on the spine, and the body brought down as in the spontaneous evolution.

But when the infant is large, the pelvis small, and that this last operation cannot be accomplished, the spine may be fractured, the far side of the infant drawn down and incised with the perforator, the body divided into two parts, and either extracted with facility.

This operation ought to be performed sooner than leave the woman to die undelivered; and I have succeeded in accomplishing it, in two cases, with very little difficulty.—(*Manual of Obstetricy*, 1831).

When the head or abdomen of the infant is dropsical and enormously distended, paracentesis or tapping ought to be performed in the womb.

When two infants are united by the chest, as the Siamese brothers, or by the back, as the Hungarian sisters, or the twins born lately at Exeter, both bodies may pass through the pelvis at the same time, which shews the wonderful power of nature.

Again, there may be two heads attached to one body, or double extremi-

ties may belong to one head, and yet spontaneous delivery may happen.

When one infant is expelled as far as the neck, and the head of the second is in the pelvis, the labour will be more difficult. In such a case, the first infant that was partially expelled was born dead, and the second alive.

The head of the second infant might in such cases be pushed up out of the cavity of the pelvis in the absence of labour pain. In some of these cases craniotomy or detruncation must be resorted to.

Twins --- Triplets --- Quadruplets. --- When there are two or more infants in the uterus at the same time, each labour is to be managed on the general principles already stated, one or two infants may present by the head or feet, or require version, or other operations.

In cases of *twins*, when the first infant is born, the membranes of the second may be ruptured immediately afterwards, as the vaginal passage is properly dilated, though, according to Denman, we should wait for four hours, and to Burns, one hour.

I prefer immediate delivery, by which the second infant is most likely to be saved.

In twin or plural labours there may be two placentæ placed side by side, and then they are not expelled until after the birth of the second infant, although I have known a period of three days to elapse between the expulsion of both infants.

In some cases the navel cords are inserted into one large or double placenta, and in these and as well as in all cases, each cord ought to be tied in the manner already described in the third stage of parturition, after the birth of the infant.

The Placenta.---As a general rule, the obstetrician should not leave the patient until the placenta and membranes are expelled, as there is more or less danger of hemorrhage while they remain in the womb.

When the placenta and membranes are not expelled at the expiration of an hour from the birth of the infant, it is necessary to remove them, unless they shall be expelled by the means recommended when describing the third stages of parturition.

Operation.—The coat is to be removed, and the right hand and arm lubricated with pomatum, lard. &c. The navel cord is to be twisted round two fingers of the left hand, and put on the stretch. The right hand, the tips of the fingers being brought in contact, is to be passed in the form of a cone, along the navel cord, through the genital fissure, which is to be slowly and gently dilated, then into the vagina and uterus to the placenta, which in general will be found prominent in the centre, on account of being separated from the womb by more or less loss of blood. Some portion of the edge of the placenta is now to be separated with the fingers from the womb, pressure being made with the left hand on the abdomen, over the last organ, and the fingers slowly and gently insinuated between the substance of the placenta and womb, until the whole placenta is separated from the uterus. The hand is to be closed upon it, the knuckles pressed against the womb, to excite its contraction, the pressure with the other hand, or that of an assistant, on the abdomen, continued on the lower part of the abdomen, until the contraction of the womb will expel the hand, placenta and membranes.

The external genital aperture should now be gently compressed; all clots of blood removed; a warm napkin applied, and some warm drink or cordial given to the patient.

Hour-Glass Contraction of the Womb. —When the infant's body is expelled in the absence of labour pain, by the woman making pressure with the abdominal muscles and diaphragm, or when an ignorant obstetrician, either male or female, extracts the body after the expulsion of the head, in the absence of labour pain, the womb will be left a large empty sac, and when the next pain returns, will contract irregularly, in the form of an hour glass. In this case, the placenta will be generally in the upper part of the womb, above the contraction, and will be retained. The danger of retained placenta is hemorrhage, or if the placenta cannot be extracted, and remains two or more days, it decomposes, is partially absorbed, and produces typhoid symptoms and death.

Operation.—The hand is to be introduced in a conical form, as in retained placenta, and the fingers passed one by one through the contraction, which may take two hours to accomplish with great pain to the woman, and such pressure on the hand as to cramp it and compel its withdrawal; and the muscles of the arm may become painful and remain sore for several days. The

obstetrician ought to persevere as long as he can, and in general he succeeds in passing the hand through the contraction to the placenta, which he extracts in the manner mentioned in the treatment of retained placenta. When the placenta is retained four or five days in warm weather, the genitals are contracted, decomposition of the retained organ takes place, and the woman generally dies. It is sometimes retained without hour-glass contraction in delicate women, from irregular or inefficient action of the uterus and in such cases a full dose of morphia or a sedative may be given, and afterwards a proper use of the ergota, before the hand is introduced.

The placenta may also be detained from adhesion to the uterus, and then its extraction, or so far as this can be effected, is indispensable.

The placenta may be expelled by uterine contraction, as in natural labour, but the womb may afterwards dilate and cause profuse *after-hemorrhage, or internal hemorrhage,* which distends the womb. In such cases, pressure on the abdomen and the uterus, to contract the latter, the ergot of rye, dashing cold water on the naked abdomen from a ewer, and introducing the hand into the uterus, to press on and irritate its inner surface, so as to excite contraction, may be necessary.

This after-flooding may be expected in cases of delicate women, and will be prevented by a proper use of ergota during the labour. The dose may be increased in such cases, so as to put the womb completely under the influence of the medicine before the birth of the infant.

Death of the Fœtus in Utero.---When the infant is dead for five or six weeks before delivery, its motion having ceased, the abdomen shrunk, a sense of weight, and rolling of some solid substance; when the woman assumes different postures, the breasts flaccid, no placental or fœtal murmur, and labour threatened repeatedly, it appears to me that it ought not to be prevented, because the absorption of the amniotic fluid and of the decomposed placenta, prove highly injurious to the health of the woman.

There is great difficulty in positively determining the death of the fœtus in utero, even by auscultation, and this has led to the precept of allowing the woman to arrive at the end of pregnancy, and to quiet uterine action before this this period, by rest and opiates.

There are cases in which it is perhaps impossible to state that the fœtus is dead; but there are others in which little doubt can exist.

Labour with Convulsions.—When there are *convulsions* during labour, delivery ought to be accomplished as soon as possible.

Labour with Rupture of the Uterus or Vagina.---In cases of *laceration* or *rupture* of the *uterus or vagina* when there is strong labour, and some impediment to the descent of the fœtus, the patient exclaims that something has given way within her, the labour pains suddenly cease, the head or other presenting part recedes, the abdomen becomes irregular, and there is a discharge of blood in most, but not in all, cases from the vagina, The pulse becomes small and rapid, the breathing laborious, there is a tendency to fainting, the extremities become cold, and there may be vomiting of a coffee-coloured fluid. The consequences of this accident may be death, from hemorrhage or from inflammation of the womb or bowels; though recovery may happen even after a second laceration in a future labour.

Treatment.---The exhibition of some wine or spirit and water, and immediate delivery by version the forceps or craniotomy. The hand should be passed into the womb, and even through the laceration of it into the abdomen if necessary, to seize the feet and bring them and the body through the laceration into the womb, and extract them as in version. Dr. Blundell felt the liver, as also did Dr. Ramsbotham senior. But when the hand cannot be passed through the laceration, some leave the fœtus in the abdomen, and watch the symptoms of abdominal inflammation, while others advise gastrotomy. For a full account of the practice in these cases the reader may consult my *Manual of Obstetricy,* third edition, 1831.

Laceration of the Labium externum, or sanguineous infiltration of this part may require the tampon or plug to arrest the hemorrhage, or an incision to evacuate the effused blood.

Laceration of the Perineum is a frequent occurrence in mismanaged labours. (See supporting the perineum in the second stage of labour.) This part may be partially or completely torn by the head of the infant, or the improper use of instruments; or it may happen in despite of the most judicious management.

Treatment.---The limbs ought to be

kept in apposition by means of a roller applied round them, simple dressing applied, and union by the first intention effected. A piece of oiled lint, or the corner of a napkin dipped in cold water, ought to be applied to the inferior commissure of the labia when the urine is being evacuated.

When suppuration occurs, it may be necessary to insert one or more sutures, to bring the separated edges in apposition

Labour with protrusion of the bladder.---The bladder may be protruded before the head of the infant during labour, and sometimes appear external to the genital aperture. It should be replaced in the absence of labour pains, and kept in its situation with the fingers until the pain pushes the head under and below it. I once attended a woman whose bladder remained protruded until the head was perforated and reduced, and it was subjected to such great pressure, that it became livid, but the woman finally did well. Dr. Ashwell also saw this case with me.

Hernia may encroach on the vagina and protrude before the head during labour. It ought to be reduced when the pain ceases, and kept so until the head or breech, as the case may be, has descended over it.

Sloughing of the bladder or rectum may be induced by undue pressure during labour, caused by the infant or by instruments, and produce vesico-vaginal, and recto-vaginal fistulæ. These occur a few days after labour. The urine and fæces escape into the vagina, and cause inflammation, suppuration, and ulceration. I was the first British obstetrician who succeeded in curing both fistulæ in the same person, without sutures or actual cautery. A full account of this case will be found in my work on Midwifery, 1831, p. 513. M. Velpeau has also succeeded by my method (*Traité Complet de l'Art des Accouchemens*, 1835, p. 524).

Treatment.—The patient ought to be placed on the sides and abdominal surface, so that the urine may collect on the sound part of the bladder, and be prevented from constantly falling through the fistula, and irritating the vagina. In recent cases the vagina should be plugged with oiled lint, which is to be removed every twenty-four hours, and a new quantity introduced. The bladder may be evacuated with a catheter, unless the fluid passes through the urethra. When the bladder is kept nearly empty by means of the catheter constantly worn, the parietes of the bladder will approximate, and the wound contracts and finally closes. In some cases the edges of the wound will cicatrize, and must be touched with nitrate of silver or in some cases with the actual cautery. When the vagina is ulcerated, a lotion of the acetate of lead with opium will be very beneficial. The general health should be properly attended to.*

Tumours of different kinds may impede the progress of the head during labour. These are usually left to nature, and are generally expelled, or they have been excised, the perineum being first divided.

When *hydrothorax or ascites* render the respiration very laborious, it may be necessary to deliver the woman in the sitting posture, or on the knees, a fact that shews that parturition may take place in different postures from what is termed the obstetric position.

Obliteration of the external genital aperture.---Cases are recorded, and I have lately treated one successfully, in which the external genital aperture is so closed at the time of conception as not to be capable of admitting a goose quill. As pregnancy advanced, dilatation gradually took place, and delivery was effected without artificial aid.*

Passage of the infant per rectum.—Dupuytren and others have recorded cases in which an infant was born per anum, and without laceration of the sphinctur.

Obliquities of the Uterus.---The uterus may be inclined to either side (lateral obliquity), or anteriorly, when it is termed anti-version, or pendulous abdomen; or posteriorly called retroversion. In all these cases the orifice of the womb will be displaced and unaffected by the labour pains, or cannot be felt, the head descends, the substance of the uterus becomes thinned, lacerated, or gangrenous, and may require *vaginal hysterotomy*. Obliquities of the uterus are obviated by placing the woman on the opposite side, on the back or abdomen, according as they are lateral, anterior, or posterior, and the os uteri is then to be hooked on the finger when this can be done.

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* A Mr. Baxter has claimed the merit of my method, in the Lancet, December 1836. I take this opportunity of stating, that this writer has not the slightest claim to originality or priority in the matter.

† See Manual of State Medicine and Medical Jurisprudence. By M. Ryan, M.D. 2d edition, 1836.

The London Medical
AND
Surgical Journal.

Saturday February 25, 1837.

THE HUNTERIAN ORATION.

In consequence of the alterations which were going on in the Building of the College, it will be recollected that no Hunterian Oration was delivered last Season, it could not therefore have been anticipated, that any of the preceding Orators would have had the hardihood to have even alluded to the blunders which had been made, and to the destruction of the Hunterian Manuscripts, until after the *legal evidence*, which was given before the Parliamentary Committee.

As it appears from this evidence that both the trustees and the curators of the Hunterian Museum, were guilty of a gross dereliction of their public duty, in allowing the valuable Manuscripts to remain so many years in the possession, and under the sole control of the literary plunderer; and as after the *burning* of the Manuscripts, they did not institute a prosecution against the Offender, for wickedly destroying the National Property; it need not be wondered at, that the Council of the College used every endeavour to conceal the atrocious transaction, nay—had even the effrontery to obtain a bust of Sir Everard Home, to adorn the Hunterian Museum!

No Oration having been given since the publication of that evidence, it was not unreasonable therefore to expect, that Sir Benjamin Brodie, in volunteering to come forward publicly to commemorate the birth, and record the contributions that had been made to Medical Science, by the extraordinary industry and gigantic talent of John Hunter, would in justice to Hunter's Memory, have stated what *he* knew or at all events, what the World knew of the literary plunders of Sir Everard Home; and that the Orator would have had the candour to have stated, how far the numerous papers which have been published in the Philosophical Transactions, under the name of Sir Everard Home, were not in fact the labors of John Hunter. In place of performing this duty, and which was certainly incumbent on him to have performed, as the historian of John Hunter, he did as those anticipated, who knew Sir Benjamin best, placed the whole matter " in the shade," and had the audacity to introduce the name of Sir Everard Home, in his harangue in terms of encomium, and in language of approbation! In order that the remarks which we have made on this occasion, may neither appear irrevelant or unmerited, we will, for the satisfaction of our readers, insert some extracts from the evidence of Mr. Clift, which cannot be perused without the deepest interest, and we do yet hope, that it is not too late further to inquire into this unjustifiable transaction; and though it may be too late to restore the property, there is yet time to satisfy public curiosity and interest, and to expose all, who may have been directly or indirectly connected with the whole affair.

Another point to which Sir Benjamin Brodie alluded to in his Oration, was the ready entrance which is now given both to the Museum and Library, and to printing the Catalogue, a task, which it ought to be remembered, has taken more than twice the period of years which were required by John Hunter to make his immense Museum.

Minutes of Evidence.

Taken before the Select Committee on Medical Education.

Mr. William Clift called in and examined.

Before the separation of those Manuscripts from the Collection, were you informed of the intention of any party so to separate them?---Those Manu-

scripts were taken by me *in a Cart* to Sir Everard Home's house, *by his order*. It was understood by the Trustees, that Sir Everard was the only person who could make a Catalogue of the Collection, and he always expressed his intention to do so.

At the time of transferring those papers to Sir Everard Home's house, did he express his intention to make use of them for a time, in preparing from them the Catalogue of the Collection?---Did any thing pass between him and you upon that subject?---Nothing passed.

Had you any conversation with Sir Everard at the time as to his removing them?---No.

Did he express to you that he merely removed them for the purpose of preparing a Catalogue?--- Sir Everard said, that those papers, being a very large proportion of the *loose fasciculi*, were not fit for the *public eye;* and therefore he should take them *into his keeping*, for the purpose of using them in describing the Collection.

Did you make any remark upon that?---No.

Were the Trustees, at the time of their taking possession of the Collection, made aware of the removal of the papers?---This was, in fact, just before the Trustees took possession of the Collection. I do not believe they were made acquainted with it at that time.

At the time of the removal of the Collection to Lincoln's-Inn-Fields, in 1806, did you in any way communicate with any Members of the Council of the College respecting the existence of the Manuscripts, descriptive of the preparations?---I do not believe that any inquiry was made of me upon that subject.

Did you, knowing of the existence of the Manuscripts, inform any of the Members of the Council of the College of their existence?---I believe not.

Would it have been possible for you, between the period of 1806 and 1813, even if you had been so inclined, to have availed yourself of the Manuscripts, by comparing them with the preparations?---*It was almost impossible.*

It is stated, "When, however, the Conservator began his task of preparing the Catalogue, he expressed a wish to obtain some of Mr. Hunter's manuscripts; and thus did the Board of Curators learn for the first time, the extent and nature of the Manuscripts, relative to the Collection left by Mr. Hunter." When did that pass?---I think not till 1823.

From 1817 to 1823, had you ever access to the Manuscripts which Sir Everard Home removed?---Never, except such as he brought with him to compare with specimens in the Collection, for *his own special purposes.*

What do you mean by his own special purposes?---When he was preparing for his Lectures, *or drawing up papers for the Philosophical Transactions.*

In giving him assistance in the arrangement, did you ever ask him to let you have access to the Manuscripts, to enable you to draw up descriptions of any particular preparations? No.

Between the time of his removing the Manuscripts, in 1830, and the period of 1823, when you expressed a wish to obtain the Manuscripts, had you ever any conversation with Sir Everard Home on the subject of the Manuscripts?---During the whole of that period, Sir Everard was so intent *on writing papers for the Philosophical Transactions*, that very little else, in the way of the Collection was thought of by him; because he always made his engagements in this way an excuse to the Trustees for not having proceeded with the Catalogue, saying, that we were employed in making out the subjects *which were but imperfectly understood.*

On what occasion, and in what terms, did you convey either to the Council, or to the Board of Curators, the information you possessed, respecting the existence or removal of those Manuscripts?---Though I believe all the Members of the Board had a very imperfect knowledge of the nature of those papers, yet they knew that Sir Everard had in his possession *all Mr. Hunter's Manuscripts.*

In what way did those Members of the Board of Curators obtain a knowledge of the existence of those papers?---Through Sir Everard Home himself, while he was a Member of that Board. Besides which, almost all of them had been acquainted with Mr. Hunter, and must have known of the existence of a large mass of Manuscripts. After the destruction of the papers, Mr. Cline said to me, on Mr. Hunter's own authority, that Mr. Hunter had written a Treatise on the Diseases of the Bones, which he intended for publication. Drawings, intended to illustrate this

Treatise, and made by an artist who lived in his house, Mr. W. Bell, are preserved in the Museum.

From conversation with individual Members of the Board of Curators, are you satisfied they had a knowledge of the existence of those Manuscripts?---A very imperfect one of their extent.

From conversation with them, had you reason to know that they were aware, that there were Manuscripts relating to the Collection, in the possession of Sir Everard Home?---They did not know the *extent* of those papers.

Do you believe, from conversation with them, that they were aware that those papers relating to the Collection in the possession of Sir Everard Home?---I do not know that, before the destruction of the papers, I ever had any conversation with any of them on the subject.

Then from what is it that you were led, in a former answer, to state, that the Curators had some notice of there being papers of this kind in Sir Everard Home's possession?---No doubt from conversation at some period or other.

When was it that you first received information as to the destruction of those Manuscripts?---I think in July, 1823.

Was that before or after the Curators made application to Sir Everard Home for restoration of the Manuscripts?---Before.

What knowledge did you first obtain of the circumstance, and how did you obtain it?---From Sir Everard himself.

State all that you know about it?---Sir Everard began by telling me, that an accident had very nearly occurred at his house: that it had been nearly on fire: that the engines came, and the firemen insisted upon taking possession of his house. They saw the flames coming out of the chimney. He did not wish to admit them, but they insisted upon being admitted. I asked him how it happened, and then he told me, *that it was in the burning those Manuscripts of Mr. Hunter's.*

What were your feelings at the time of receiving that information?---I can hardly describe them. I said to him, "I hope, Sir Everard, you have not destroyed those ten volumes relating to the Gallery." He said, "Yes." "And Mr. Hunter's Lectures?" "Yes." And then I mentioned twenty others, that I had a very perfect recollection of.

Will you go on and describe your feelings and what passed?---I can hardly describe them, because I felt that all those hopes that I had entertained, were entirely frustrated and destroyed. I considered that my life had been spent in the service of that Collection, and I hoped to have lived to see those papers beneficially employed. When I made inquiry respecting the principal of them, and he told me they were all gone, I said to him, "Well, Sir Everard, there is only one thing more to do." He said, "What is that?" I said, "To burn the Collection."

In the course of this conversation did you ask Sir Everard, what led him to take this step?---I knew that that week Sir Everard had received back from the printer, that last proof of his second volume of Lectures on Comparative Anatomy, and that he had used those papers very largely in the composition of that work. "Report from the Select Committee on Medical Education, with the other Minutes of the Evidence and Appendix. Part II. Royal College of Surgeons in London, August, 1834.

MORISON'S PILLS.

The following extract, which contains an account of the examination of the President of the Royal College of Physicians at the late trial, will be read with great interest. It unfolds all the *acumen* of genius, along with that scientific pursuit and love of justice which so pre-eminently adorn the character of the worthy baronet.

Mr. Joseph Hume, who stated he had been a chemist all his life, said he received three boxes from Mr Steele, two containing pills, and the third containing powder. Ten pills from No. 1. weighed 27 grains, and 10 smaller pills weighed only 20 grains, taken from the same box; 10 pills, taken from No. 2, weighed 26 grains, and 10 from the same box weighed only 19 grains. In 50 grains of No. 1, he found 22 grains of aloes, 23 grains of cream of tartar, and 5 grains of gum and other vegetable matter; 50 grains of No. 2. contained 8 grains of gamboge, 4 grains of cream of colocynth, 11 grains of aloes, 13 or 14 grains of cream of tartar, and the remaining 12 or 13 grains

of gum and other extraneous matter. The witness was of opinion that the insoluble quality of cream of tartar would be injurious in the pills, and might convey them whole into the narrower parts of the system.

Sir Henry Halford was next examined. He said, I have heard the publications read in court, and I have also heard the evidence as to the ingredients in the pills, No. 1 and No. 2—aloes, gamboge, &c. Gamboge is a *rough* medicine, sometimes used, but *not commonly*.

Question—What would be the effect on the constitution of any person from a perseverance in using these pills?—I should think they would have a *deleterious* effect when not *applicable to the disease*.

What would be the effect in pulmonary consumption?—To produce *diarrhœa* and shorten life.

Now these pills are prescribed to infants. Would you administer such medicines to an infant? — Certainly not; I should think them *very dangerous*.

In an advanced stage of small-pox are such purgative medicines proper to be administered; I ask you, as a course of general medicine?---O certainly such pills are not applicable to *a general course*.

You have heard that these pills are prescribed for all diseases and under all circumstances. What is your opinion on the matter?—I should think that they would be, in many diseases, *strongly injurious*.

In your opinion are these pills dangerous to human life taken in the way mentioned? --- O certainly dangerous taken in that indiscriminate manner.

SURGICAL CHAIR OF THE UNIVERSITY COLLEGE.

Abortive attempt to displace Mr. Samuel Cooper.

To those who have occasionally breathed the atmosphere of Gower-street, it has been for some time well known, that an intrigue was carried on to obtain, by some means or other, a portion, if not the whole of the surgical chair for Mr. Liston. Under any circumstances such conduct would have been considered as unjust towards Mr. Cooper, and it must give universal satisfaction to all thinking persons, to see that the projectors of so deep a plot have been completely discomfited.

We need not here revert to the circumstances which led the Joint Stock Company of Gower Street to consider Mr. Liston as a person suitable for their purposes in the North London Hospital. We have already severely animadverted on the monstrous principle of endeavouring to attract pupils to a school, by converting the loathsome diseases of the poor and indigent, which may require the operations of surgery into theatrical exhibitions. But it seems it was never contemplated, neither did Mr. Liston ever receive any promise, directly or indirectly, either of a portion of the chair of Mr. Samuel Cooper, or of the whole chair, in the event of Mr. Cooper's resignation. On the contrary, however, much the medical senate may have appreciated the advantages which the hospital might derive from having a "dexterous knifesman," in order to attract a sufficient number of pupils to pay for its support, they considered Mr. Liston as quite incapable of filling the surgical chair. Finding his endeavours to have a share in Mr. Cooper's lectures to be unavailing, but still determined to shew how competent he was to displace Mr. Cooper, he migrated to St. George's Hospital, where he gave a course of lectures on surgery to less than a dozen pupils, all of whom were not always present. When this flight was proposed to the Medical Council, in place of its exciting any disappointment or annoyance, as Mr. Liston had anticipated, much to his astonishment, his scheme was highly approved of! and the council flattered themselves, that they had got rid of the would-be professor on the most favourable terms. Mr. Liston made a second endeavour this season, by resuming his surgical lectures at the school of St. George's Hospital, and though he met with nearly equal success as on the previous

season, as to the numbers of his audience, yet it appears he was not satisfied, and he was still ambitious to supplant Mr. Cooper. To effect this, however, great sagacity, a great deal of that caution for which his countrymen are so remarkable, and above all, a determined effrontery, were absolutely necessary to storm the surgical chair at the University College; and had not Mr. Cooper been well prepared to defend himself, having heard a whisper of the movements of the enemy, and had he not fortified the citadel he might have been vanquished, and obliged to surrender "at discretion" to the storming party of General Liston. When, therefore, the letter purporting to be from "An University College Pupil," made its appearance in that journal, over which Mr. Liston piques himself on having an unlimited power to insert either his own communications, or those of the individuals whom he employs to write in his behalf, it was full time for Mr. Cooper to act on the defensive, and the following note, which we have much pleasure in copying from a cotemporary periodical, with whose sentiments we seldom agree, satisfactorily proves, how superiorly Mr. Cooper's military movements must have been directed, and with what admirable dexterity and skill he must have organised his troops on this occasion: —

MR. S. COOPER AND MR. LISTON.

"In consequence of a letter in the *Lancet* of last week, representing it to be the wish of the students at University College that Mr. Liston should be *associated* with Mr. S. Cooper in the Chair of Surgery, a meeting of the gentlemen attending the lectures alluded to took place on the 15th, at which a resolution *denying the truth* of the assertions, and *strongly* disapproving of the sentiments expressed by the anonymous advocate of Mr. Liston, was unanimously passed."

"Mr. Cooper's theatre on Wednesday evening was crowded to overflowing, and he was received in such manner as to show that he had lost none of his well deserved popularity. From the nature of the address which he made at the close of his lecture to the assembled students, it is quite clear that the plan of forcing a colleague upon him has no chance of success. To use his own words, the chair is not large enough to hold them both, and, if Mr. Liston once got *into it*, there would be *no room* for *him*."

Bridge House Hotel, Southwark,
Feb. 15, 1837.

SIR,

I am directed to forward you the enclosed copy of a letter which has been sent to the Editor of the *Medical Gazette*; it is intended for the Journal, if you can spare us sufficient space.

I am, Sir,
Your humble Servant,
WM. EALES, *Hon. Sec.*

To Dr. Ryan.

BRITISH MEDICAL ASSOCIATION.

To the Editor of the Medical Gazette.

SIR,

We must request you to publish, as early as possible, the following remarks on your leading article of Jan. 28th, on the British Medical Association, and the Meeting of the Profession at Exeter Hall. On Thursday last, a council meeting was held for the first time since the publication of that article; and after the business was transacted, attention was called to it by one of the members as being in every way *unjust, illiberal*, and *unprofessional*. The personalities and abuse heaped on the Association and its promoters, were thought altogether unworthy of notice, as the right was readily conceded to you, of criticising and condemning according to your own peculiar taste, or abusing and ridiculing, if you thought proper, any body of medical men who may appeal to the public, or any part of it, for support.

The right, however, to *pervert the* TRUTH, to MISREPRESENT their objects, and MIS-STATE their proceedings, was altogether denied to you, or

any one; and as we consider that you have done all these, we have been requested, on these grounds alone, to disabuse the minds of your readers, and to point out to them wherein you have falsified our actions and intentions.

1st, You charge us with "having thrown off the mask." Our answer is, we have never worn one, as we have never been ashamed of showing our faces. In proof of this, we refer you to an authority you will at once bow to, and of which you cannot plead ignorance; viz. the 7th number of the present volume of your own journal; in which you not only did us the fovour to publish a sketch of our Association as contained in certain propositions transmitted to you by the secretary, but in a prefatory article you spoke of the members with "feelings of courtesy and fellowship." This was after the dinner in the Borough; but we must also refer you to the full report of the speeches at that dinner, contained in No. 7 of the current volume of the *Lancet*, where you will find quite as explicit an avowal of our objects and intentions as was made at Exeter Hall. Our Chairman's excellent speech is too long to quote, but it is a full and satisfactory development of the causes which led to the formation of our Association; and of the principles upon which it was intended to be conducted. In framing the laws of the Association, these principles have been strictly adhered to, except that our plan has been so far extended as to include as members all physicians and consulting surgeons, who may have liberality and good feeling enough to join a large and respectable body of general practitioners, without the fear of *degrading* themselves by coming in contact with "*subordinates*:" but we certainly never intended to give the management of our Association into their hands. At that time it was only contemplated (see your Journal already quoted) "that the general practitioners of England and Wales should form themselves into an Association" for the certain purposes then declared; one of which was, "that a Benevolent Fund should be formed for the assistance of decayed members of the (*whole*) profession, and for the benefit of their widows and orphans." Another was, "that it should by all legal means, or by application to parliament, if necessary, endeavour to *remove* every professional *grievance*, *evil*, and *hardship*;" and another, "that the Association should by all means in its power promote the welfare, prosperity, and union of *its own body in particular*; and uphold the dignity, respectability, and usefulness of the *profession at large*."

Our opinions of the ruling powers—the colleges, corporations, and halls—were clearly expressed by the Chairman's words, that, "had they done their duty, we should not have been called upon to meet this night, to take the matter into our own hands, and form an Association:" and by Dr. James Johnson, who, in alluding to the colleges, &c. said, "Our three heads unfortunately pull three different ways, and leave the body to draw any way it likes, or be pulled to pieces by its enemies;" and again, "let the body put its shoulders to the wheel in the work of *reform* and *union*, and it is not impossible that in due time, the *three heads* may be *joined into one* to cooperate with the body." We need hardly extend our quotations to convince any sane person that we wore no mask. If any mask *has* been worn, it has been by yourself; you have been hitherto hiding, behind a friendly guise, those feelings of hostility which have now been called forth, by the liberally bestowed praises of the whole medical press; these seem to have been gall and wormwood to you, and you do all that is left in your power; you endeavour under your anonymous editorship to injure us by misrepresentations and unfounded assertions.

2ndly.—Our meeting at Exeter Hall is said to have been "a miserable failure." No doubt you would have rejoiced had it been so, and "the wish was father to the thought"; but if to have encreased our numbers far beyond our expectations be to have failed, we hope we may have many more such miserable failures.

3rd.—We "blew no trumpets with "desperate blasts," as you assert, during the three weeks preceding our meeting; but merely twice published our advertisement (the first only twelve days before the meeting) in the *Lancet*, *Medical Gazette*, *Times*, *Herald*, and *Chronicle*,—and this by the way reminds us that the said advertisement appeared only *once* in your journal, though payment was made for *two* insertions; it is true the money was returned when

called for, with a bungling apology; but the omission was an odd circumstance, which *you* perhaps can explain.

4th.—The editor of the *Lancet* once, and *once only*, wrote an article in our favour, which was published on the Saturday before the meeting; and we have yet to learn that there was any crime in this, either on his part or ours, though this seems greatly to have excited your atrabilious propensities.

5th.—Our meeting, instead of consisting of "not above 100 persons," as you *veraciously* assert, was composed of more than twice that number of professional gentlemen, each having "a local habitation and a name," and not collected from the "highways and byways." The only surprise is, that so many attended, considering the epidemic that prevailed, and that half the medical men were in bed.

6th.—The room we engaged in Exeter Hall (the general committee room) was not left empty, but overflowing; we never had the presumption to think of occupying the great room, which is capable of containing several thousand persons.

7th.—Of the individuals present, three only expressed dissent; and not one spoke of seceding from the existing, and not the proposed, institution, as you call it. Dr. James Johnson spoke against *one* of the laws (not an essential one), but cordially approved of all the others; while Dr. A. T. Thomson spoke only against the adoption of the Address, but repeatedly expressed his approval of the Association. Mr. Boddy, who so candidly "spoke out his sentiments," was not then, and is not now a member of the Association; he withdrew because we would not agree to exclude *all* physicians and consulting surgeons from our council. He must not, therefore, be supposed to have expressed the opinion of a single member of the Association; none of whom "went about it, and about it,"—to use your elegant phraseology.

8th.—Dr. Webster was Chairman of the meeting from being President of the Association. He was "brought to town" and chosen to the latter office much against his inclination, because he was one of the founders and first members, and because he is a true and fearless friend of his professional brethren of all classes, and a man of talent and high respectability, and certainly not the less qualified to be a general practitioner, or our president, that he is a graduate in medicine. As to his being "an active Chairman," it was part of his duty, as the representative of the Association, to give explanations, answer objections, &c.; and notwithstanding your important information, that you have never heard of him before the medical dinner, he may possibly consider this a compliment, and a proof that, at least, you know nothing either against his moral or professional character.

9th.—You have enumerated a few licentiates, who have been court physicians since the time of Sir Walter Farquhar, some thirty years ago, himself a notorious intriguer; but you are most unfortunate in your references, as most of those you mention have, it is well known, attained that eminence in spite of all the opposition, influence, and intrigues of the medical prime minister. Sir Wm. Knighton *scorned* the fellowship; but insisted that his friend, Dr. Southey, should be made both a court physician and a fellow; and commanded that the exclusive by-law should be suspended for that purpose! Sir Gilbert Blane felt himself insulted by the arrangements of the last court batch, and threw up his appointment of physician extraordinary in *disgust*; and it is notorious that Dr. James Johnson, to whom you so triumphantly refer, was grossly insulted by having his name left out of Sir H. Halford's list, although he had been physician to the Duke of Clarence; and it is equally well known, that our gracious sovereign's interference alone caused his re-appointment. So much for court intrigues; though, before leaving them, we would ask if Dr. James Clarke was appointed physician to the heiress to the throne by the consent or recommendation of the president or fellows of the college? Certainly not. We say then that Dr. Webster was right in stating, that the fellows "do all that union and interest can to prevent licentiates being appointed to hospitals or the court;" and it is no proof to the contrary, to say that some do attain these posts; when the president and fellows immediately translate them from the lower to the upper house, that they may not be *contaminated* by coming too closely into contact with licentiates, though some of them have spurned the proffered honour.

10th.—We do not wish to abolish all distinctions in the profession. We hope ever to uphold the distinctions and honours gained by superior qualifications, talents, experience, and industry; but these ought to be judged of by the body at large, and by the public. Our rulers ought to be elected on these grounds, and not by exclusiveness, selfishness, obsequiousness, and intrigue. We think the honours of our profession should be open to all, and not confined to a few only. In short, we wish to see, "a clear stage and no favour."

11th.—The British Medical Association notwithstanding your unpropitious prophecy, already consists of more than "a considerable number" of the Practitioners of the Metropolis; and we hope, will soon embrace the great body of the profession throughout the Kingdom.

12th.—We disclaim all *party spirit*, and observe no *political* distinctions, for many of us are staunch conservatives in general politics; but we all wish to remove the known and admitted abuses of the profession; and the grievances under which we daily labour, have brought us together, and produced our union.

Lastly, Mr. Wakley is not the Founder of our Association, though he is a warm supporter of it, and of our professional rights and privileges; and was this moment working hard to obtain a Parliamentary Committee, on the Poor Law oppressions of Medical men. You knew this as was proved by the article on the subject in last Saturday's Gazette, but you had not the generosity to give the least merit to a rival. The great body of Medical Practitioners however, feel greatly indebted to Mr. Wakley for his exertions.

On a previous occasion our Secretary stated to you, that we did not wish to have the opposition of any part of the Press. Your departure from a just course has called forth the preceding remarks; but we shall only add that if you think you ought to oppose us from a sense of what you consider your duty to your subscribers, we hope you will refrain from misrepresenting us; and only speak of us, to use your own words so as best to support "Dignitatem artis medicæ."

We are, Sir, Your humble servants,

"Two of the Council."

Feb. 15*th*, 1837.

[*From the American Journal of the Medical Sciences, Nov.* 1836.]

CASE OF MONSTROSITY.

BY S. R. CAMPBELL, M.D.,
Of Albemarle County.

September 18th, 1835, I was called to see Mrs. L. J. P. in her fourth labour. She is a lady of delicate constitution and frame; and of sedentary habits. At two previous labours she had suffered from a retention of the placenta by firm adhesion to the uterus, which required manual interference to effect the delivery. When I arrived labour had commenced. Upon examination I found the os tincæ well dilated; and the membranes protruding (as I then supposed) very much distended. After waiting some time and labour pains coming on more rapidly, she insisted on rising to her feet to be delivered, as had been her custom in her previous labours. She was gratified; and as soon as she rose a small discharge of blood took place without any liquor amnii. Upon examination I found the elbow with something that I could not determine by the touch, presented, and which I at first supposed to be the membranes, but which subsequently proved to be the naked bowels of the infant. The lady discovered the blood on the floor, became alarmed, and her pains immediately left her. She was put to bed again, and after waiting a considerable time without any return of uterine contraction, I administered a dose of ergot, which brought them on again, and she was speedily delivered of a deformed female child, which left the mother without any attachment by a funis that I could discover. The case also required the introduction of the hand for the delivery of the placenta, which was found very firmly attached to the fundus uteri, and removed with very great difficulty, owning to the want of a funis to direct the operation. At this time the lady has a fair prospect of recovery. I obtained the consent of the parents to preserve the child, which I have now in my possession; and of which I will give as accurate a description as I am capable. The head, neck, arms, and thorax, are all normal as to size and form. The anterior parietes of the abdomen between the zyphoid cartilege and the symphisis pubis, and the ends of the false ribs, and the spines of the

ilium were deficient, the bowels being covered by a thin membrane only, which was ruptured before delivery. There was no appearance of an umbilicus, except a single, very small artery, without either vein or external covering, which issued from a point midway between the false rib and the spine of the ilium, where the muscles and skin terminated. The vertebral spine is curved backwards, and a little to the right side; the hips lying against the lumbar vertebra. The right lower extremity is of normal size and shape, with the knee lying against the right shoulder; the leg is flexed on the thigh, and the instep lying on the cranium, where the sagittal suture meets the lambdoidal. The left lower extremity is deficient in part, the thigh being shorter than the right, and the knee or joint (more like the hock of a horse's hind leg) is flexed forwards towards the bend of the right knee, where the leg, about an inch in length, terminates. From the upper part of the right hip there arises a fleshy protuberance about an inch and a half in length, and half an inch in diameter at the base; an inch from the base it bends downwards at an angle of 45 degrees, and from the bend to the point it tapers like the prepuce of an infant's penis. The external genital organs are nominal. The uterus, the ovaria, and all the internal organs of generation, are deficient, except the vagina, which terminates in a sack. There was but one kidney that could be discovered, and it was larger than natural, and misplaced, being attached to the diaphragm above and in front of the stomach. All the other organs of the pelvis, abdomen, and thorax, were normal. Wishing to preserve the child in spirits in its natural form and position, no further examination was made.

CASE OF INVERSION AND PROLAPSUS OF THE UTERUS.

BY THOMAS F. BETTON, M.D.

On the evening of the 4th of August, 1836, I was called to see the wife of S. R., living at the Rising Sun Village. On my reaching the house, I found a woman of about 18 years of age, *in extremis*. The midwife gave me the following history:—The patient had an easy delivery, the midwife placed her hand on the abdomen, to feel if the uterus were contracted; but could not perceive it. A violent pain followed immediately, and the placenta, with something adhering to it which she did not understand, was forcibly expelled. This I found, on examination, to be the uterus, completely inverted and prolapsed, laying like an inverted gum elastic bottle between the thighs. I immediately separated the placenta, and endeavoured to restore the uterus, which endeavour was successful in two or three minutes. The woman was pulseless from loss of blood, the carotids could not be felt, and the action of the heart was extremely feeble. Jactitation extreme, mind wandering. About twenty ounces of blood had coagulated around the uterus, and between it and the placenta, which was partially separated. As she lived at some distance, I did not see her for about an hour after the occurrence of the accident, and she had lost at least 80 ounces of blood before my arrival. She did not lose more than two or three ounces after the reduction of the uterus; but, in her exhausted state, that was too much. I gave her immediately a large dose of the vin. tinct. of secale cornutum, but it failed in its expected effect. Brandy and wine and water were liberally administered, but in three quarters of an hour after my first seeing her, she expired.

RANDOM MEDICAL RECORDS.

From the Note Book of Vigil.

Cases of Aneurism.

St. Bartholomew's, May 24th, 18——.

Aneurism situated in the anterior inferior cervical triangle; Consultation; difference of opinion; imperfect examination; consequent ignorance of the Artery affected; observations.

A middle-aged delicate looking woman was this day accompanied to the hospital by her medical attendant, for the purpose of receiving the opinions of the surgical gentry, forming the staff of St. Bartholomew, upon the nature of her case. Her statement was as follows:—three weeks since her attention was directed to a small pulsating tumour,

situate at the lower and anterior part of the left side of her neck, which continuing to increase in size and action, induced her to shew it a few days since to her medical adviser. This gentleman states that she has been subject to dyspeptic affections for the last three or four years, and has taken a good deal of medicine at various times, but chiefly purgatives. Latterly she had been troubled with a *short cough*, but has had *no expectoration*.

The tumour is now about the size of a large walnut; *its exact situation is at the inner edge of the sterno-mastoid muscle of the left side, by which it is partly overlapped, and is distant about half an inch from the sterno-clavicular articulation.* It does not project very much in the neck, is of an oval shape, the long axis being in the direction of the *carotid* artery. It cannot be circumscribed with the fingers, and a pulsation synchronous with the pulse is present over its anterior and lateral parietes. Two of the surgeons and some of the pupils examined the tumour. Mr. ——— hesitated in pronouncing it to be aneurism, on account of the numerous glands situated in this quarter, and the variety of causes which may induce one or more of them to become enlarged, and to have a pulsatory movement communicated to them from the carotid artery. The other Mr.— had no hesitation in pronouncing it to be an aneurism, in consequence of the tumour not being *lifted up*, but its *sides* as well as its anterior surface being *distended* at each pulsation. With this opinion the FIRST Mr., and indeed every one present coincided. The next and most important steps in the inquiry were to ascertain what artery was the seat of the disease, and what hopes of a cure could be offered the patient by operation. But here all was indecision, confusion and contrariety of opinion. Mr. THE SECOND supposed it to be an aneurism of the carotid artery at its origin, but cautiously qualified this opinion by stating that aneurisms of the arch of the aorta often presented themselves in this situation. The *subordinate* ventured an opinion that *probably* it *might* be aneurism of the arteria innominata, or of the subclavian artery, at which Mr. THE SECOND, condescended to distort the muscles of his face, but I would have defied Lavater, were he present, to determine whether the movement was intended for a smile or the contrary. Mr. THE FIRST, after having made the *happy hit* about the *enlarged cervical gland!* "prudently kept his tongue betwixt his teeth," and proceeded to visit his patients. A few of the pupils chatted one thing to another, and the patient, with her medical friend, left the hospital, both as wise as when they came!

Observations. It struck me at the time, that in a case so very interesting, greater attention was not given, and more care taken to ascertain the *exact seat* of the disease, particularly where all parties, including the patient herself, felt so anxious about it. THE GIANT *of medical reform* (at that time) was stalking the wards of the hospital, and it struck me it would not have been amiss to have had his opinion upon this case, but he was never consulted. *He* probably would have noticed the *varicose condition of the superficial veins* upon the *anterior part* of the *neck and chest*, which was most remarkable.

Did not such a condition of these superficial veins warrant the conclusion that the aneurism was of longer formation than *three weeks*, and if so, that in all probability it was the *arch of the aorta*, or the *arteria innominata*, which was the seat of the disease, and not the *carotid artery?* Where also was the stethoscope? Even if this despised assistant to surgical diagnosis was not within reach, what prevented the gentleman from taking advantage of nearly as good a substitute, and making *mediate auscultation* with the instruments which nature so bountifully lavished upon the persons of both? *Midas* himself was *ignorant* of the advantages *he* possessed!

Mr. THE SECOND promised to see the patient *in consultation* at *her own house*, which probably accounts for the little interest taken in the case as an *hospital patient.*

CASE 2ND.

Aneurism of the Arteria Innominata—Obscure Symptoms—Relief from various Medicines—Sudden Death——Post Mortem Examination—Observations.

A gentleman aged 34, residing at ——— was diligently attended by his medical adviser for an incessant short dry cough, accompanied by no other secretion but a very small quan-

relief. Still, however, the cough would invariably return. When I saw him he had the appearance of robust health; his pulse was 70, his bowels very irregular, his tongue foul, and he said he "often found difficulty in *completely* drawing his breath." *A few grains of calomel were ordered him every other night, and a senna aperient every morning.* In a week after his tongue was much clearer, his bowels had been operated upon freely, and the difficulty in breathing was completely removed; but still the cough continued.

He was ordered three grains of James's powder every night, and some ipecacuanha lozenges ad libitum, and directed to abstain from spiritous liquors, and to reduce his quantity of animal food to one half.

By persevering in this treatment for a fortnight, his cough left him, and to all appearance he was in perfect health. In a few days afterwards he was hastening up stairs, was seized with a violent fit of coughing, in the midst of which he threw up a large quantity of florid arterial blood, and *died!* Upon opening the thorax, *an aneurism of the arteria innominata*, arising from the tracheal aspect of the artery, presented itself. It was not larger than a small walnut, was intimately attached to the trachea, at the point where the artery crosses this tube, and had opened into it, giving rise to the fatal hemorrhage.

Observations.---During the life of this gentleman, the existence of an aneurism was never suspected. No tumour presenting itself. The stethoscope was used; the *lungs* and *heart* were declared free from disease, which diagnosis the *post mortem* examination proved to be correct. His pulse never indicated any deviation from health, and every medicine ordered him afforded relief, particularly the James's power, which altogether removed the cough for a time; owing, no doubt, to the well-known effect this medicine produces upon the circulating system. I do not know any symptom in this interesting and singular case, which would warrant us in saying an aneurism existed, except the *incessant cough*, accompanied with a *very slight mucous expectoration*, which symptoms would also have been present if *any* tumour kept up a *constant irritating pressure* upon the trachea.

THE LINNÆAN ARTIFICIAL SYSTEM OF BOTANY,

Illustrated and Explained, by THOMAS CASTLE, M. D. F. L. S. &c.

Fashion exerts an influence almost as despotic in the domain of science, as in the affairs of every-day life; viz. as regards the multitude; there are some who are not governed by caprice, who are not to be deluded by the fancies of opinionated sciolists, and are determined not to exchange the treasures handed down to them by the wisdom of past ages for those baseless hypotheses and flimsy theories which now and then flash out with a momentary splendour.

The advocates of new and spurious doctrines require us to abjure our former notions, and receive their "new lights;" by this means however, they mar their own purposes, for who would "throw a pearl away" without a recompense, at least of equal value. The Linnæan System of Botany, the most simple, the easiest of application and of reference, and the most perspicuous method of classification ever discovered, is threatened with annihilation by the disciples of the so-called 'Natural System. These latter are not satisfied with extolling their favourite to the skies, but they deny that its rival has any merit or any claim upon the attention of the scientific observer. They are so warped by prejudice, that they will not allow it even the paltry office of serving as a stepping stone to the temple of Flora, and are to be satisfied with nothing short of its extirpation. A noted expounder of the 'Natural System,' in a recent publication, devotes about half a page to the 'Linnæan Method' and sums it up as follows "the scheme is worth no further notice." Hence it is not astonishing that young men, and especially conceited young men, should takeup the same opinion, I sneer both at the system itself, and at every one who thinks it "worth notice." We wish not to imitate this exclusive and monopolizing disposition, we concede to the Natural System all the merit to which it can fairly lay claim, we would not disparage it, but does it accomplish all that its adherents

tity of clear mucus. His general health was good, sometimes requiring an aperient, and he took various cough mixtures which afforded him temporary

assert it to do? Is it not vastly more difficult than the arrangement of Linnæus? Have not some of its expositors so refined upon it, that the orders bid far to equal the general in number. As a philosophical system we admit its value, but as to its practical use in the discovery of species, who would think of dissecting a minute seed, to arrive at the name of a plant? We are not required to follow a similar plan in any other department of science; we are not compelled to dissect the ovum or the fœtus to distinguish a Negro from a European, or a tiger from a *panther*. Has the Natural System performed all that it promised, as regards the diagnosis of the properties of plants?---We answer, no! An arbitrary series of canons drawn from experience is much more to be depended on. And the sentence of Linnæus so triumphantly brought forward by these exclusives '*Systema Naturale primum et ultimum in botanicis desideratum*,' still remains a desideratum.

It is time, however that we adverted to the work before us. It is illustrative of the Linnæan Artificial System, as the title indicates, and is certainly written with much ability and taste. It may be truly said to be embellished with a frontispiece, for it exhibits one of the most elegant illustrative plates that we ever remember to have seen; the border containing a selection of coloured figures of plants belonging to the various classes, is very rich and beautiful, and the interior arrangement showing the various diversions of the system is ingenious, and sufficiently clear to be understood by those who have not studied the fascinating science of Botany. The descriptive part of the work consists of three sections; the first gives the derivation and meaning of the classes and orders; the second a more extended description, with reference to well-known British and exotic plants, with their systematic names; and the third contains general rules, for ascertaining the position which any particular plant may occupy. We would strongly recommend the work to all students of Botany. Parents are sometimes deterred from introducing works of this kind into the family circle, because they contain allusions to the sexual organs of plants, we observe that there is no mention of it here, probably with a deference to these scruples. It will be a recommendation in these days of economy, to observe, that considering the expense which must have attended the getting up of the plate, which is engraved by Sowerby, the price of the work is very moderate.

MEMORY.

Cases are recorded of the forgetfulness of a language constantly spoken, while one nearly forgotten from want of practice was recovered. A patient in St. Thomas's Hospital, who had been admitted with a brain fever, on his recovery spoke an unknown language to his attendant. A Welsh milkman happened to be in the ward, and recognised his native dialect; although the patient had left Wales in early youth, had resided thirty years in England, and had nearly forgotten his native tongue. Boerhaave relates a curious case of a Spanish poet, author of several excellent tragedies, who had so completely lost his memory, in consequence of an acute fever, that he not only had forgotten the languages he had formerly cultivated, but even the alphabet, and was obliged to begin again to learn to read. His own former productions were shewn to him, but he could not recognise them. Afterwards, however, he began once more to compose verses, which bore so striking a resemblance to his former writings, that he at length became convinced of his being the author of them. —*Millingen's Curiosities of Medical Experience.*

MADDER.

M. Runge, of Berlin, has extracted three very distinct colouring matters from madder, which he calls crimson, red, and orange madder. The first will dye cotton, steeped in a mordant, of a deep and brilliant red. A solution of ammonia will change it into a beautiful rose colour. The second dyes the same material of a deep red; strong acids will turn it yellow, and alum water into violet. The third produces an orange yellow, and if the cotton be previously steeped in alum it will give a dull red. All these dyes are in the form of a crystallized powder.

TO CORRESPONDENTS.

North Staffordshire. We cannot give any opinion upon the statements respecting the coroner's inquest, as they appear to us to be ex parte; besides it would interest our readers but little to peruse a statement extending over six pages of foolscap, merely about the priority of Messrs. Dudley and Tait, or Mr. Day, to give evidence.

Cantab. The *Argentum Nitratum* is in great vogue as a therapeutic agent at the North London Hospital. It is also employed for dying hair, and receives the sanction of some of the professors. The Berlin dye is entirely composed of vegetable matter.

Mr. Penruddock was a pupil of St. George's hospital; he passed his examination at the College of Surgeons before presenting himself at the Apothecaries' Hall. These are the only queries we feel bound to answer in *D. V.*'s letter.

Acupuncture. The mistake of removing the sound in place of the diseased testicle, was caused by "constitutional irritation," and not from ignorance.

Trin. Col. Dub. Dr. Macartney did give lectures at St. Bartholomew's Hospital in the year 1803. His lectures were announced, "Mr. Macartney's lectures upon comparative anatomy and physiology, including the structure of vegetables, as being illustrative of the laws of organic existence." He received an honorary degree from Trinity Collegy upon his appointment to the Professorship of Anatomy and Physiology; and at the time of Mr. Macartney's appointment, it was a matter of much surprise, that Mr. Wilmot, the present Professor of Surgery in the College of Surgeons, was not elected to the vacant chair.

As a Morbid Anatomist, you are quite entitled to "take up" any subject you please, for in assuming that name, and coming forward in that character you are a kind of non-descript, a *tertium quid* of the old chemists, and never can incur any of the penalties of either of the colleges.

We mean not to obtrude on your valuable time by offering any remarks on what you appropriately denonimate "your *partial and scanty gleanings*," and on your expressions of regret in not having been able to follow up enquiries, which you say you have been desirous to make, and which, at present, you have candidly stated you have no opportunity to prosecnte. All this is a species of cant and of sophistry too glaring to require comment from me. We cannot, however, take our leave of you, Dear Doctor, as one deeply interested in the success of the New London University, without requesting your particular attention to those words and phrases in the notorious paragraph, which we have taken the liberty to mark in italics, as they afford excellent examples of your acquirements as an English scholar, and also of your classical taste.

A Subscriber from the First.—A Friend.—A Constant Reader, and Others.—This Journal is published regularly, and if the Bookseller named, do not supply it until the Wednesday, there are others in his neighbourhood who will punctually do so on every Friday. It is very easy to bring him to his senses. Change him if he cannot do business like other people.

Justus. The conduct of certain lecturers at the Hospital near Charing Cross, is unjust, little minded, and preposterous. They have neither common honesty, nor common sense; and will injure themselves mnch more than any one else.

Correspondents. We request some of our friends will have the goodness to write plainly, if they intend that any one is to peruse their communications.

ERRATA.

No. 261.—Page 653, Line 2 from bottom, for "Secretion *of* Nutrition," read "Secretion *and* Nutrition." Column 2, line 14 from the bottom, for "*Removal* of Lost Parts," read "*Renewal* of Lost Parts." Line 4, for "*conceivable*," read "*inconceivable.*" Page 657, col. 1, line 21 from bottom, for "*molare*" read "*mature.*" Page 688, column 1, line 27 from bottom, for "daily *exertions*," read "daily *excretions.*"

No. 262.—Page 686, column 2, line 6, for "*circumstance*," read "*circumstances.*" Page 688, column 1, line 16, for "*nervous*" read "*venous.*"

All communications and books for review to be forwarded, carriage paid, to Dr. Ryan, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

MANCHESTER ROYAL INFIRMARY

THE

London Medical and Surgical Journal.

No. XXVII. SATURDAY, MARCH 4. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XII.

Generation.

Peculiarities of the Fœtus.---Position of the Fœtus.---Influence of the mind of the Mother on the Fœtus.---Lions, Elephants, and Rabbits brought forth by Women.---Queen Charlotte and the Bear.---Muscularity of the Uterus.---State of the Vagina in Pregnancy.---Quickening.---Good and Bad Reasons for the Fœtus not being felt before.---Upright Gait of Pregnant Females, Corpulent Persons, and Tailors.---Cure for Stooping.---Infallible Test of Pregnancy.---Legal Period of Gestation.---Time of Pregnancy in Different Animals.---Exciting Cause of Labour.---Course of the Uterine Fibres.---Opening of the Os Uteri.---Gathering of the Waters.---Rupture of the Membranes.---Cause of the Easy Labour of Quadrupeds.---Delivery in Prolapsus Uteri.---Birth of an Infant after the Death of its Mother.---Action of Ruysch's Muscles.---Delivery of the Placenta.---Nature of the Lochia.---Cause of its Unpleasant Odour.---Sympathy of the Mammæ with the Genital Organs.---Large Size of both in Hottentots, and of the former in Married Women and Prostitutes.---Secretion and Composition of Milk.---Effect of Venereal Desire.---Number of Children from each Marriage in Different Countries.---Viability of Infants.---Cause of their First Inspiration.---Signs of Maturity in the Fœtus.---Scotch and English Law on the Signs of being Born Alive.---Tenancy by Courtesy.---Crying in the Uterus.---Illegality of Destroying Monsters.--Inheritance of Property by Monsters and Hermaphrodites.--- Cæsarean Operation.---Mentioned by Pliny and the Talmud.---Infanticide by Omission.---Death by Falling to the Ground.---Rapid Delivery.---Chaussier's Experiments.---Strangulation by the Umbilical Cord.---Suffocation of the Infant.---Weight of the Infant at Birth.---Different Instances, from Two Pounds to Twenty-six.---Central Spot of the Body.

The fœtus has various peculiarities. I. *Number* of parts, as the bones. II. *Situation* of parts. 1. The bladder. 2. The ovaries. 3. The testicles are within the abdomen. 4. The *cauda equina* is lower down than at a later period of existence. III. *Size* of parts. 1. The lungs. 2. The thyroid gland. 3. The supra renal capsules. 4. The intestines. 5. The liver. 6. The cerebellum. 7. The skull. 8. The pelvis. 9. The lower limbs. IV. *Form* of parts. 1. The bladder, which resembles a pear with the base upward. 2. The kidneys, which are lobulated. 3. The crystalline lens, which is very round. 4. The optic nerves, which are hollow. 5. The lower jaw, which has hardly any angle. V. *Additional* parts. 1. The placenta. 2. The umbilical vessels. 3. The ductus arteriosus. 4. The ductus venosus. 5. The thymus gland. 6. The urachus. 7. The membrana pupillaris. 8. Bregmata. VI. Difference of *fluids*. 1. The blood does not coagulate; it is said to contain *gelatine* instead of *fibrin*, it probably contains

nascent fibrin. 2. The bile. 3. The stools are nearly pure mucus. 4. The urine contains less of the salts of potash. 5. The marrow is red, and not oily. VII. Difference of *functions*. The fœtus has probably only four of these. 1. Circulation. 2. Respiration. 3. Secretion. 4. Absorption. The *position* of the fœtus *in utero*, is the result of a law of organization, and not of its weight.

We know so little of the subject, that it is impossible to say how far the passions of the mother may affect the fœtus. An impression of its possibility has been prevalent from very early ages, as is proved by Jacob in reference to his flock. The ancients sometimes recommended that a woman during coition and pregnancy, should be surrounded by pictures and statues of beautiful persons. I have a list of twenty names, including some of the highest in medicine, who have supported the affirmative of the question, respecting the influence of the mother's mind on the fœtus. Instances are given of women bringing forth various animals, even lions and elephants, enough, in fact, to stock a second Noah's ark. In the time of George the First, a woman in Surrey, is said to have lowered the price of rabbits, by the shoals she brought forth. Skenk relates many stories of a similar description. One child is said to have been born with all its limbs broken, owing to its mother, during her pregnancy, having seen a man broken on the wheel; and another child was born with a hairy skin, from the mother having looked much at a picture of John the Baptist. The same thing is said nearly to have happened to Queen Charlotte, while pregnant with the Princess Amelia, because she was frightened by a bear.

It is the opinion of most of the German physiologists, with Blumenback at their head, that the uterus is not furnished with muscular fibres until pregnancy takes place; and this view is probably correct. The uterus is the only organ, the natural function of which is inflammation; for pregnancy is regarded by Meckel as a chronic inflammation, from the stimulus of impregnation. The growth of the uterus is not owing to the presence of the fœtus; for in *extra-uterine* conceptions, the uterus grows as large as if the fœtus were in it.

In the early stages of pregnancy the vagina is *shortened;* but about the fourth month it is *lengthened.* At the latter period *quickening* is said to take place; because the motions of the fœtus are then felt for the first time. The reason why they were not felt before this period, is said to be the small size of the fœtus; but a small worm in the rectum gives a perceptible sensation. Another reason which is sometimes given is, that the bones of the pelvis which surround the uterus, do not allow it to feel; but we feel a blow on the *head.* The true reason is, that it is not till the fourth month that the uterus comes into contact with the nerves of animal life; and for the same reason, worms in the intestinal canal are only felt at the nose and the rectum.

A pregnant female has a very upright gait; and the same may be said of a corpulent person. They lean backward in order to counterbalance the weight at the forepart of their person, which would otherwise expose them to the danger of falling forward. Hence, in order to cure a habit of stooping forward, the best plan is to add weights to the *fore* part of the body. A tailor has a very upright gait, from his exerting the muscles of his loins while at work to avoid falling on his nose; and carriage-horses are made to lift their feet by nailing heavy weights to them. The exertion necessary to lift these weights, strengthens the muscles; and when they are taken off, the feet are elevated almost without effort.

The stethoscope is probably the only infallible test of pregnancy. Cases are recorded of children being reared, though born as early as the fourth and fifth month; and as late as the third and fourth year. It is only when the statement of the parties is corroborated by collateral circumstances, that we can trust to it. The "Code Napoleon" says, that a child is illegitimate if born beyond three hundred days after the death of the husband. The Scotch law allows a child to be legitimate, though born as early as the sixth month, or as late as the tenth. The English law decides every case on its own merits. In animals the period of utero-gestation varies exceedingly; though in general their terms are as distinct as those of women; and their time of copulation is well known. The mare is pregnant about *ten* months; the cow *nine;* the

ewe and she-goat *five*; the lioness *three and a half*; the female of the dog *nine weeks*; the cat *seven*.

A variety of absurd reasons have been given for labour coming on at the termination of pregnancy: such as the desire of the fœtus to pass its urine, or stools, or to stretch its limbs; but the contraction of the uterus comes on, although the fœtus be not in it; the pregnancy being extra-uterine. I think it is owing to a stimulus originally imparted to the uterus at the time of conception, and renewed at intervals, according to the laws of periodicity, which are so obscure, and yet so certain. In the female of the dog it often happens, that although she may not have conceived, or may have been at heat without even being coupled, signs of labour come on at the period at which she would have pupped, if she had conceived.

The fibres of the uterus are perpendicular at the upper part, and oblique at the lower. When the former act, the *fundus* of the uterus is pulled down; and the bag of waters is pushed out of the *os tincæ*. A little mucus is at the same time protruded; and obtains the name of "*shew*." If the membranes be ruptured at this period, the effect of the contractions of a great part of the fibres is lost; from their pressing on the child instead of acting, by means of the bag of waters on the *os uteri*. The waters inclosed in the membranes form a loose wedge.

The pelvis of quadrupeds is very much constricted; but this circumstance does not impede labour; for the *symphisis pubis* is opposite, not to the sacrum, but to the caudal vertebræ, which allows as much room as could be wished. Besides, it is said that the symphisis separates during parturition. The efforts of the mother are not so effectual in assisting the birth of the child, as in expelling the urine and feces; for the muscles of the bladder and rectum are much better supplied with voluntary nerves. In the latter stages of labour, when the *os tincæ* is open, and the child partly expelled, the efforts of the mother may be useful, for the actual expulsion is like that of the stools; and if the uterus be prolapsed, Sabatier says, the woman cannot be delivered without instruments. The fact that a child is sometimes born after the death of its mother, led to the idea that the fœtus contributed to its own expulsion; and this was thought to be corroborated by the analogy of the chicken breaking its shell. The former, however, is from the irritability of the uterus surviving the death of the mother; and between the uterus and the egg-shell there is no analogy.

Ruysch's muscles not only separate the placenta, but also close the mouths of the vessels which are ruptured during that process. When the placenta is withdrawn, it is wrapped up in its membranes; the amnion being outside. In quadrupeds the membranes are not ruptured, but are born with the fœtus; together with the fœtal part of the placenta. The cow devours these parts. The lochia is probably pure blood at first; but afterwards looses its fibrin, and the red particles. It contains shreds of the placenta, which give it an unpleasant odour.

In those nations which have large genital organs, the mammæ are large also. Juvenal mentions the large breasts of Hottentots. The ape, the bat, and the elephant, have mammæ on the chest, and the porcupine behind the shoulder-joint. The large mammæ of married women and prostitutes, seem to prove that their size depends on sympathy with the genital organs; and the great irritation of parturition no doubt causes a secretion of milk. When venereal desire is present, the nipple is often erected. Milk consists of water, sugar, elain, butyrin, casein, sulphur, and muriate and phosphate of soda and lime.

The average number of children from each marriage is, in England and Sweden, between *three* and *four*; in France, between *four* and *five*; and in Portugal and Russia, between *five* and *six*.

The first inspiration of the new-born infant, is chiefly from irritation of the *portio dura*; but it may be partially owing (as Sir Charles Bell suggests) to the straightening of the spine; which cannot be done without the ribs rising. With respect to the *viability* of infants, we may observe, that a child may be born *alive* at the *twentieth* week; but it it is not *viable* till the *twenty-fifth*. At the latter period, it is about eleven inches and three quarters long. The best single mark that it has reached that age, is, that the centre of the body corresponds to the ensiform cartilage. The skin is very fine in texture; and

of a red or purple colour. The spine is about five inches long. Ossification has commenced in some of the vertebræ.

To prove that the child was born alive, the Scotch law requires that it should be heard to cry. In one case a claimant was nonsuited; although the child lived half an hour after birth, breathed, and raised one of its eye-lids.

The father wished to inherit, in right of his wife (that is, to be "a tenant by courtesy);" but he was defeated, because the child did not cry. A similar case occurred within these few months. The English law, with a greater share of common sense, only says that the child must be "born alive." With respect to the *crying* of the child, Coke argues very curiously, peradventure, it may be born *dumb*." On the other hand a child may cry *in utero*. A case was decided in Westminster Hall in favour of the father, although the only evidence of life in the child, consisted of two tremulous motions of the lips, while it was in a bath. The Scotch law leaves no room for discussion; if the child *cry*, it is alive; if it do *not* cry, it is dead.

The vulgar think it is lawful to strangle monsters, but it is illegal. Two women were tried for it at York, in 1812. Blackstone says, a monster cannot inherit, if it have not the human shape; but it may inherit if it have that shape, although deformed. An *acephalous* monster could not inherit. One lived four days; but as it was not *viable*, or not fitted to go through the ordinary business of life, the father could not inherit in virtue of the child. Hermaphroditism would perplex the descent of any property which was settled on children of either sex.

Could a father inherit in right of a child *cut out* of its mother? It is not *born* alive. The Cæsarean section is mentioned in the Talmund. Pliny says, Cæsar was so called, "ab utero cæso," of his mother. Macduff says, he was not *born*, but "untimely ript" from the womb of his mother. The law only inquires whether the woman *lived* after the birth of a child, though but an instant.

The Cæsarean section has been only once successful in this country; but on the Continent, it is said to have been performed five or six times on the same woman.

What if a child be born after the reputed death of the mother? The question has never been determined; but I think, in such circumstances, the mother is not *dead*, but only *asphyxiated*. The *animal* life is gone, but not the *organic*; or the uterus could not have contracted. I think, in such a case, the father ought to inherit.

The means by which infanticide is accomplished, are generally divided into those of *omission* and *commission*.

We shall consider them in the following order:—

1. *Neglecting to keep the child from falling to the ground.* Children are sometimes *accidentally* injured in rapid deliveries, even when a midwife is in the room.

It sometimes happens, when the woman is getting out of bed, or walking about the room, or is in the water closet. In one case, while the mother was bathing her feet, the child fell into the water. These accidents generally happen in warm countries. Two cases of this description led to trials. In one of them the child fell into a privy; and in the other, into the ashes under a grate. In the latter case, the mother being unmarried, and having concealed her pregnancy, was transported. This took place in 1814. Chaussier found by experiment, that when dead children were allowed to fall from a height equal to that of the pelvis of a female from the ground, *twelve* out of *fifteen* sustained fractures of the skull. But I think this would not have occurred in *living* children; and besides, in the latter, the fall will be broken by the umbilical cord, or the clothes of the mother.

2. *Neglecting to loosen the umbilical cord.* This kills by causing strangulation.

3. *Neglecting to tie the umbilical cord.* It has been long agitated, whether the contractile power of the umbilical artery, would not be sufficient to prevent hæmorrhage, as it is in quadrupeds. But the vessels of the latter are rugous and cellular. It was urged, that we do not block up the *foramen ovale*, or tie the *ductus arteriosus*. But the former has a valve, and the latter does not transmit blood; because the pulmonary artery is sufficient to transmit all the blood sent into it; while the hypogastric arteries, going to the umbilical cord, being real branches of

the aorta, are open to the full force of the heart.

3. *Suffocation.* This may be caused by the discharges of the mother, or by wet linen; or, if the child lie on its back, by the mucous in its own throat. The latter may do this by impeding the flow of blood.

If a child be born dead, the older its fœtal life, the greater the probability of its having been born alive, and *à fortiori*, of its having arrived at the ninth month.

At that period, the centre of the body is at the umbilicus; and, as life advances, it becomes even lower. Here is an image which has the centre of the body above the umbilicus; but it is a monster. Judging from fifteen thousand examples, Lussien says, the length of a full grown fœtus is eighteen inches (French measure), or nineteen and a fifth (English). The average weight is seven pounds; but we should add a quarter of a pound for the average of *males*, and the average weight of *female* children at birth, may be taken at six pounds three quarters. Carus gives the extreme weights at *two* pounds and *ten* pounds. Macauley states them at *four* and *eleven*. It is hardly possible that a mature child can weigh only two pounds. Beck gives an instance of a child which weighed sixteen pounds and a half. One author gives a case in which it weighed twenty-six pounds. If true, it must have been a monster.

The shifting of the middle spot of the body depends on the superior parts of the body being first developed; so that if we found only the lower half of the body, I think we could tell the age of the child. At the adult period, the centre falls on the *symphisis pubis*. Pure blood is not the only cause of the development of the upper parts; for the development of the lower extremities advances proportionately faster even in *utero*, and the central spot descends.

All the preceding marks shew the *probability* of the child having been born alive; but we must try to find out the *certainty*. We must therefore consider the extra-uterine respiration, circulation, and digestion of the child. By the new function of respiration the lungs become *actually* heavier, but *specifically* lighter, and increased in size. We generally confine our attention too much to the entrance of *air*, instead of considering the entrance of *blood* also. Besides all these points, we must take into consideration the colour and consistence of the lungs.

OBSTETRIC APHORISMS,

By M. Ryan, M.D. &c. &c.

[Continued from page 799.]

LABOURS ATTENDED WITH HÆMORRHAGE.

Varietes.—1. In Abortions.—2. In Placental Presentations.—3. During Labour.—4. Hæmorrhage from Retained Placenta.—5. After the Birth of the Infant.—6. After the Expulsion of the Placenta and Membranes.

Abortions.—The expulsion of the fœtus and its appendages before the uterus is sufficiently enlarged to admit of any manual operation, which is before the completion of the sixth month, is termed *abortion* or *miscarriage*.

The expulsion of the fœtus and its appendages from the completion of the sixth to that of the ninth month of pregnancy, during which manual introduction may be effected, if required, is termed *premature* labour.

Premature labours are to be managed upon the same principles as parturition, at the full term of pregnancy.

Signs of Abortion.—Frequent desire to evacuate the bladder, pains in the back, loins, abdomen, and groins, with a sense of pain, weight, and bearing down in the region of the uterus; discharge of blood from the vagina, which proves that some portion of the membranes of the ovum are separated from the womb.

Treatment.—Confinement to bed or a sofa, a full dose of morphia, or the sedative preparation of opium to allay the pains, plugging the vagina with oiled lint, muslin, pieces of old silk handkerchief, or sponge, so as to compress the os uteri, and favour the formation of a coagulum; venesection in full habits, cold to the inferior part of the abdomen, as ice, cold lotion, vinegar and water, and acetate of lead, with opium internally, are the best remedies.

Abortions are generally prevented by this plan of treatment.

The loss of blood may be very slight, or the hæmorrhage so profuse as to require transfusion, or to destroy life.

Hæmorrhage may be arrested by the contraction of the coats of the blood-

vessels, or by the formation of coagula, plugging their orifices. Both these conditions may be produced by faintness from loss of blood; so that we ought not to rouse the patient too speedily unless the syncope continues too long.

Cold astringent injections may be passed into the vagina or rectum.

Purgative medicines are injurious when abortion is threatened, or has commenced. Walking, and every kind of exercise, as well as nuptial intimacy ought to be avoided.

Women who are subject to abortion ought to wear an opiate or a belladonna plaister across the loins as soon as they suppose themselves pregnant. They should avoid all crowded assemblies, live temperately and regularly, keep the bowels regular every day, and avoid sexual intercourse at the approach of the period at which menstruation would have occurred, had not pregnancy existed.

But when abortion cannot be prevented, the ovum and its appendages may be expelled, or the latter may remain in the womb.

In the latter cases, plugging the vagina and supporting the strength, will be necessary.

The secundines or placenta and membranes may be retained in early abortions, for five or six weeks, during which time there will be more or less hæmorrage.

The plug ought to be extracted every twenty-four hours, the vagina injected with some astringent and sedative lotion, and a new plug introduced.

In many cases, the secale cornutum or ergota, will cause the expulsion of the secundines.

The obstetrician should make a vaginal examination daily, and if he feels any portion of the placenta or membranes in the os uteri, extract it, either with the finger or a clean dressing forceps, kept exclusively for the purpose.

I cannot agree with those who advise a forceps to be passed into the uterus to seize the placenta, as this is a rash and dangerous proceeding, because it is impossible to ascertain the exact position of the placenta, and consequently there would be as much probability of laying hold of the uterus as of the placenta.

Placental Presentations.—When the placenta is attached over, or near the os uteri, it becomes separated between the seventh and eight month of pregnancy from this part, that is, when the neck of the uterus begins to dilate, the connecting vessels are torn, and there will be more or less hæmorrhage, unaccompanied by labour or uterine pain, and the loss of blood is often so profuse as to destroy the woman and the fœtus. There are no labour pains, because the time of labour has not arrived. This is one of the most fatal cases in obstetricy.

Treatment.—Institute a vaginal examination, and ascertain whether the placenta is directly over, or its edge attached near the orifice of the womb, and the size of this last part. If the uterine orifice is dilatable, and the size of the disc of a shilling, it ought to be dilated with the fingers, which are to be passed through it at either side of the pelvis, so as to avoid lacerating the centre of the placenta when over the os uteri, the membranes ruptured, the feet of the infant grasped in the hand, and the operation of *version* performed as already described. The woman ought never be left in a case of placental presentation, until she is delivered, and the obstetrician should never wait for, or expect labour pains at the seventh or eighth month of pregnancy, or allow the woman to lose one, or several pints of blood, which may destroy her.

Some advise waiting until the uterine orifice is dilated to the size of the disc of half a crown, and not to force it or dilate it; but in my opinion, when the hæmorrhage is so profuse as to endanger life, or require transfusion, the obstetrician ought to dilate the uterine orifice by gradually passing his fingers in conical shape through it, and perform the operation of version.

It is to be recollected, that parturient action with dilatation of the uterine orifice may happen from the moment of conception to the completion of pregnancy; and that a cautious dilatation, or as it is very absurdly termed, "a forcing of the os uteri," is not necessarily either a dangerous or a fatal operation.

Hæmorrhages are more dangerous when sudden than with slow discharges of blood, even though the quantity lost may be equal. (Denman.)

Hæmorrhage during Labour.—This form of flooding is caused by a partial separation of the placenta from the womb during labour, and requires immediate delivery by some of the obstetric operations already described.

Hæmorrhage from retained Placenta after the birth of the infant, require

the immediate extraction of the placenta.—(For the operation, see retained placenta.)

When the strength of the woman suffers from profuse hæmorrhage, nutritious aliment, as the vegetable jellies, sago, arrow-root, tapioca, and the animal broths and jellies are to be employed, in small and repeated quantities, so soon as they can be prepared.

When there is great prostration of strength, hurried respiration, great anxiety, pallidity of the face, lips, and skin, diffusible stimulants, as brandy, whiskey, rum, gin, with ammonia and opium, are to be freely administered. A pint of undiluted ardent spirit has been given to a woman who never took a table-spoonful during her previous life. Half a wine-glass full of spirit may be administered every quarter of an hour.

When flooding is violent and extreme, and every sign of death apparent, after the free use of stimulants, the face is blanched, the respiration scarcely audible, the pulse absent, the extremities cold and clammy, the power of deglutition lost, and vomiting incessant, the life of the woman is in the greatest danger. Nevertheless, women have remained in this condition for seventeen hours and finally recovered.

When asphyxia occurs, and the patient appears at the point of death, the operation of transfusion alone can save her. Dr. Blundell has immortalized himself by the successful performance of transfusion on the human subject in extreme cases of hemorrhage. He performed the operation successfully, for the first time, on a patient of Dr. Waller's, in August, 1825.

Mode of performing the operation.—A double brass syringe, tinned on the inside, with a lateral tube, large enough to contain two ounces, perfectly air-tight, not clogged with oil or covered with a green rust, is to be selected for the operation. The instrument must be perfectly clean, and an ivory, or rather a silver tube is affixed to the extremity of the lateral one. A small funnel is sometimes attached to the barrel of the syringe, by means of which the blood passes from the arm into it, without being received into an ordinary vessel. A stop-cock is also attached to it, by turning which the communication may be opened either with the funnel or with the extremity of the instrument. The syringe should be warmed by passing tepid water through it four or five times, care being taken not to use it too hot, as a heated instrument would tend to coagulate the blood.

The basilic or cephalic vein is to be laid bare, by making an incision over it, about an inch or an inch and a half in length, and separating it from the surrounding cellular substance. A probe is now to be passed under the vein, and pressure made on the point of contact between the instrument and the vessel. The object of this is, not to permit the blood to ooze from the vein when opened, which would impede the operation. An opening is now to be made into the vein with a clean sharp lancet, about the size of that used in venesection, to admit the point of the silver or ivory tube attached to the syringe.

The husband, or some healthy male, is to be bled from a free orifice, and the blood received into the funnel, or into a common vessel, immersed in tepid water.

The pipe of the syringe is to be immersed in the blood, and the piston raised slowly and steadily. It is now important to bear in mind that there is a quantity of air in the syringe and lateral tube, which would prove fatal if injected into the vein of the woman. To remove this, the handle of the syringe is to be turned downwards, and the point upwards, the piston being pressed on, until the blood flows from the end of the lateral tube. When this is accomplished the air is expelled, and the operator places the point of his finger over the nozzle or end of the lateral or transfusing tube; the syringe is now raised in the horizontal or ordinary position, the silver or ivory tube is carefully introduced into the open or incised vein of the woman, and the blood is very slowly injected.

The blood ought to be injected slowly, for if passed suddenly, it may extinguish life. When the blood is injected, the tube is to be withdrawn from the arm, and the syringe well washed with tepid or cold water. Unless this is done, clots of blood will impede, or wholly prevent, the action of the instrument. It is necessary to wait five or eight minutes between each injection, so as to allow the blood to circulate throughout the body.

The quantity of blood required for successful transfusion, will vary from

eight to twelve ounces. It is remarkable that the pulse rises after the first or second injection, the countenance brightens, the voice returns, and the patient seems to be revived from death to life. I have witnessed this fact in a case in which I had the valuable assistance of Dr. Blundell, and also in cholera patients.

If the respiration ceases, death is certain and sudden.

When the woman has revived, after one or more injection, the probe is to be withdrawn from under the vein, and the wound treated on ordinary principles. Its edges are to be approximated, secured with adhesive plaister, over which a cold lotion is applied.

After-treatment of hemorrhage.—In a few hours reaction supervenes after hemorrhage, with or without transfusion. The skin becomes hot, the pulse rapid, and there is a sense of noise in the ears, as if thunder or the noise of artillery were heard by the patient. These symptoms are not to be subdued by antiphlogistic measures; but by nutriment, a moderate use of stimulants, as already advised, in describing the management of flooding in abortions.

Labour attended with hæmorrhage from other organs.—There may be bleeding from the nose, lungs, stomach, or intestines during parturition. Delivery should be effected as speedily as possible. These hemorrhages are to be treated on ordinary principles. The best remedy is a combination of acetate of lead with opium.

℞ Plumbi acetatis, gr. vi—x;
Acidi acetici diluti, ʒj—ij;
Aquæ distillatæ, ʒiii;
Liquoris opii sedativi, ʒss—j;
Sacchari purificati, ʒj.
Dosis. ʒss. secundâ vel tertia horâ.

Bleeding, nitrate of potass, digitalis, and ordinary measures, may also be employed.

Catheterism.—Pass the fore finger of the left hand about half an inch below the clitoris, and under the arch of the pubis, when the orifice of the urethra will be felt; or draw the finger from the bladder along the urethra, which is under the symphysis pubis. The catheter being oiled pass it into the meatus urinarius, along the symphysis pubis, and when introduced about an inch and a half it will be in the bladder. The stilet is now withdrawn, and a small basin placed under the instrument to receive the urine.

The person of the woman ought never to be exposed in performing this operation; unless when the parts are inflamed and swollen, and their natural situation changed.

PUERPERAL OR CHILD-BED DISEASES.

Lochia — Uterine evacuation after delivery.—This fluid is at first blood, which is expressed from the vessels of the womb by uterine contraction. It remains sanguineous for some few days, then becomes greenish, pale and watery, and ceases about the ninth or twelfth day in general; though it may continue in cases of delicate women for three or four weeks, or even later.

This discharge is suppressed on the supervention of fever or inflammation.

Treatment.—Daily ablution of the genital aperture with warm milk and water, by means of a sponge. When the evacuation is too profuse, the strength should be supported with nutritious aliment, port wine, &c. and a combination of the acetate of lead and opium already prescribed as an hæmastatic or anti-hæmorrhagic remedy, employed. If the discharge continues for three or four weeks, astringent vaginal injections, such as equal parts of the Liq. Alum. c. and water, may be used daily; and the Tinct. Ferri Mur. given as an internal astringent.

Afterpains.—The treatment of these has been described in the remarks on the management of women after delivery.

Secretion of Milk.—Milk Fever.—The secretion of milk often occurs before delivery; but more frequently occurs in a day or two afterwards, and is preceded by rigors or cold shiverings, and a slight fever. The heat and distension of the mammæ afford a correct diagnosis.

Treatment.—A mild aperient, diaphoretics, fomentations to the breast, with a decoction of poppy heads and chamomile flowers, and afterwards the free application of almond or olive oil. The fever is very slight and usually disappears in twenty-four hours.

Ephemera. — Intermittent Fever.—Weed.—This is to be treated as ague. A full dose of the sedative preparation of opium or morphia an hour before the accession of the cold fit, and a proper use of quinia after the sweating stage

is over, as two grains every three or four hours will speedily effect a cure. The disease may continue only one day, or for several weeks, and end in typhus.

Miliary Fever.—This disease is produced by keeping the woman too warm, either by too much bed-clothes, or too heated an apartment. There is an eruption like millet seeds accompanied by a profuse perspiration of an acid or peculiar odour. The disease is in general slight and easily removed, though it may terminate in typhus, mania or profuse diarrhœa.

Treatment. Mild purgatives, saline effervescing draughts, free ventilation of the apartment, and the remedies for typhus, &c., when necessary.

PUERPERAL INFLAMMATIONS.

Metritis—Hysteritis—Inflammation of the Womb. This disease is occasionally met with after delivery, is accompanied by fever, and consists in intense *constant* pain in the uterus, but not in the abdomen, unless the peritoneum becomes inflamed. The disease may terminate favourably by profuse perspiration, diarrhœa, or hæmorrhage; or unfavourably by suppuration, discharge of pus from the vagina or rectum, or by gangrene.

The disease may be distinguished from *hysteralgia* or neuralgia of the uterus, which is periodical, and unaccompanied by fever, and is peculiar to nervous, hysterical, and irritable women, and readily cured by anodynes and antispasmodics,

Treatment. Venesection, leeches, purgatives, diaphoretics, anodynes as opium and calomel freely, fomentations over the lower part of the abdomen, hip baths. Counter-irritation, and stimulants, should typhoid symptoms appear.

Uterine Phlebitis. Malignant Puerperal Fever. I have given a full history of the pathology and treatment of this disease in my Manual of Midwifery—Third Edition 1831, to which I must refer the reader.

Symptoms. Rigors or cold shiverings, with severe after-pains within twenty-four or forty-eight hours after delivery, intense pain in the forehead, and uterus diminution or cessation of the milk and lochia, pulse from 120 to 160, carelessness about the infant, difficult respiration, nausea or vomiting, and the rapid superventión of all the symptoms of typhus.

The disease attacks women of different ages and constitutions, and in different seasons; and is rapidly fatal in the majority of cases. It is not contagious.

Pathology. Suppuration of the veins, and lymphatics of the uterus is observed in three out of five cases of malignant puerperal fever, and may extend to the hypogastric ovarian and abdominal veins. The phlebitis generally exists on both sides of the uterus, and more frequently near the part to which the placenta was attached. The lymphatics may take up fœtid fluids after delivery, and become inflamed. The presence of pus in the uterine vessels and its transmission through the general circulation, speedily causes a rapid infection of the blood, and a series of phenomena which puerperal fever indicate. In 222 cases the uterus was affected in 197, and the peritoneum in 193, and there was pus in the uterine veins and lymphatics in 134. The terms peritonitis and metro-peritonitis cannot be applied to many of the morbid alterations in puerperal fever. *See my Manual of Obstetricy*, already quoted.

Prognosis. Generally unfavourable.

Treatment. The free use of mercury, until the mouth is affected. Two grains of calomel every hour or two, according to some; or ten or twenty grains, combined with three grains of camphor and a sixth or eighth of a grain of morphia at the same intervals. Mercurial frictions over the abdomen and over the axillæ, ʒ ij or ʒ iv every half hour or hour according to the urgency of the symptoms. The calomel has been continued, until 500 grains were exhibited, but it ought to be *always* combined with opium. This succeeds after general and local bleeding have failed, though used most freely. Oil of turpentine has also been given by the mouth, and may be applied warm to the hypogastric region and abdomen, after leeching. Upon the whole, mercury is the best remedy, though it often fails.

Phlegmasia Dolens—Cruritis—Milk Leg.

Symptoms. Pain in the calf of the leg, thigh, or in the pelvis, swelling of one inferior extremity, extremely painful, white, and does not pit on pressure. May affect one or both limbs simultaneously or successively, and the

diseased one may be double the ordinary size. Some contend that cruritis of the femoral veins is the cause of this disease, but most obstetricians deny it. The pathology is still disputed and determined.

Treatment. Leeches along the crural and saphena veins, warm anodyne fomentations, morphia to allay pain, and to procure rest, and venesection in full habits.

When the acute pain subsides, and the limb remains enlarged, iodurettted and stimulant embrocations, bandaging, acupuncture, blisters, &c. are employed to excite absorption. In some cases the limb or limbs remain enlarged for the remainder of life, though in general the disease is curable, and seldom fatal.

Abscesses of the Pubic and Sacro-Coccygeal Joints. Inflammation of the pubic joint is generally concealed from feelings of delicacy, until suppuration has happened. If allowed to proceed, there will be ulceration of the joint, separation of the bones, and lameness for months, or even years. When discovered early, the capillary growth ought to be removed and leeches applied to the mons veneris with cold lotions, purgation, and diaphoretics. Should suppuration happen, the abscess ought to be opened as soon as possible. When the pubic bones separate from each other, a bandage should be applied round the pelvis to keep them in apposition, and the woman ought to be confined to bed for six, twelve, or eighteen months. Fortunately separation of the joint is of rare occurrence.

When the sacro-coccygeal joint is painful from luxation, or laceration, leeches should be applied, with cold lotions, &c.; and should suppuration occur, and the coccyx separate from the sacrum, care should be taken, to prevent the former from uniting with the latter at right angles, as in such case, the coccyx must be broken off during the next parturition. Such union is to be prevented by placing the separated bones in apposition; and this can be accomplished in general, by passing the index finger into the rectum, and applying the thumb in apposition to it over the joint externally. In some cases the coccyx is evacuated, but this rarely happens under proper management.

The *Sacro-iliac joints* are often painful for days or weeks after delivery. This arises from their luxation to a greater or less extent, when the infant is large and the pelvis small. Confinement to a sofa or bed, with an opiate, belladonna, or hemlock plaister, will in most cases effect a speedy cure.

Paralysis of one or both lower extremities may follow parturition from the pressure of the infant on the pelvic nerves during labour. The disease is to be treated on ordinary principles.

Puerperal Mania is rarely an incurable disorder. It may continue for weeks, months, or years, but is generally cured by powerful sedatives and removal of the sufferer from home. Depletion is generally injurious. Lactation may or may not be continued.

Convulsions may occur in full habits, and require depletion; or in nervous hysterical subjects, when powerful sedatives and antispasmodics are the best remedies.

Constitutional Irritation, or Violent Reaction often succeeds severe hæmorrhage. There is fever, noise in the ears compared to thunder and other like sounds, and there may or may not be pain in the abdomen or uterine region. This disorder will be increased by blood-letting, and removed by stimuli, sedatives, and nutritious aliment.

Intestinal Irritation, or Entralgia, strongly resembles inflammation of the bowels. It occurs in constipated habits and in nervous or hysterical persons. The pain is periodical, and the pulse is natural during its absence. In enteritis or peritonitis the pain is constant and the pulse 120 or 130, remaining so until reduced by depletion. Intestinal irritation is not benefited by blood-letting, and returns as violent as before this remedy was employed. It may cease in the bowels, and apparent pleuritis or arachnitis supervene.

Treatment.—Free evacuation of the bowels with ol. ricini and ol. terebinth, followed by or combined with a full dose of morphia or sedative solution of opium. Mercury is to be continued until the alvine evacuations become of a natural colour. When flatulent or gaseous distension of the abdomen prevails, the free use of carminatives and warm fomentations to the abdomen will be necessary. The following mixture will generally afford relief when the last symptom is troublesome:

R'. Aquæ Menth. P. ℥viij; T. Rhei C. ℥vj; T.Capsici ℥j; Sp. Æther. Sulph.

℥j; Sol. Morphiæ Mur. ℥j. M. Dosis ℥ss secundâ vel tertiâ horâ.

Accidental diseases in the puerperal state are to be treated upon ordinary principles, but severe remedies should be used sparingly as they injure the function of lactation.

DISEASES OF NURSES.

There may be want or defect of milk, which may depend on defective formation of the breasts, and be irremediable; or may be obviated by nutritious aliment.

When the secretion of milk is too abundant, the diet ought to be moderate.

When the milk is thin and watery, nutritious aliment is necessary both for mother and infant.

If the milk is retained, and the breasts hot, swollen and painful, they ought to be fomented, and an aperient administered.

Every healthful woman ought to suckle her infant.

Ablactation or weaning may commence at the ninth or twelfth month, when the infant is in good health; but no time can be fixed when an infant is delicate.

As a general rule, the breast milk may be said to deteriorate after the ninth or twelfth month, or when menstruation or pregnancy recurs.

Diet and medicine have also a direct influence on the quality of the breast milk.

The infant may have farinaceous food from birth, when the breast milk is sparing and insufficient for its nourishment, and this kind of food ought to be used before the period fixed for weaning.

Inflammation of the Breast.—Warm anodyne fomentations, as decoction of poppies with opium, purgatives, and diaphoretics, are the best remedies. Leeches and cold lotions are seldom borne, and rarely do any good. When suppuration is threatened, warm poultices will expedite it, and abscesses generally discharge of themselves, or should be opened.

Ulcerations and excoriations of the Nipples.—Solutions of morphia, or of zinc, lead, ioduret of lead, and nitrate of silver, with simple or calamine cerate, generally effect a cure. The nipple should be washed before each application of the infant, and an artificial nipple employed.

REVIEW.

Les Quartorze Jours de Captivité de DUFARET *dans le Puits de Champvert. Par* M. LE DOCTEUR BIENVENU. The Fourteen Days' Imprisonment of Dufaret in the Well at Champvert. *Lyon*, pp. 40. 8vo. 1836.

THIS brochure gives the account of an extraordinary circumstance that has lately taken place in France, where it has excited considerable attention, both from the nature of the event, and the great fortitude shewn by the subject of the calamity. The narrative is drawn up by M. Bienvenu, the physician engaged upon to attend upon Dufaret, 30 years of age, who on the 2d September last, was engaged in constructing a well at Champvert, when the earth fell in, and confined him at a depth of 62 feet beneath the surface of the ground during a period of 14 days! To support existence for such a length of time in such a situation may almost be considered as miraculous, and the circumstances therefore connected with his preservation necessarily present features of considerable interest.

It appears, that the well being dug in a sandy soil, the earth had given way about the centre, and, falling in, displaced the drums or tubes which are employed in this kind of workmanship. The account Dufaret gave to his physician upon his restoration is told with great simplicity and perspicuity, and shews the man to have been possessed of extraordinary courage and presence of mind, to which, doubtless, his singular preservation is mainly attributable. Upon a report that the earth was falling in, this man called for his basket (benot) to descend, and unhappily having gone too far, and just as he had placed two planks (of poplar wood thin and flexible, about three feet in length) upon his basket, and was in the act of mounting it, he heard something crack above him, and, looking up, witnessed the displacement of his tubes. He cried out, but alas! in an instant the earth surrounded him; he was entombed and hidden from the light of day. The planks he had taken with him, served for his only protection from the sand above, which was heaped upon them, and formed as it it were a kind of vault. The cord which

was attached to his basket, and by which he was enabled to descend the well, remained, but the machine itself was thrown a little towards his left leg. The place in which he was now confined was about the height of seven feet; but this space became gradually reduced by the accumulation or infiltration of the sand, and on the third day he was lodged in a manner most painful to be sustained. His companions or fellow workmen believed him lost, but endeavoured to rescue him by pulling at the cord. This served only to raise the basket towards the planks which sustained the superincumbent earth, and in proportion as their efforts were directed in this way, the earth was more and more displaced. It was impossible for him to be relieved in this manner. His comrades ceased to pull at the cord, which he then drew towards him, and rolled up in the basket, fearful lest they might renew their attempts. They soon recommenced their operations, and he therefore drew from his pocket a knife, and cut the cord, before they had pulled sufficiently to draw up the basket. By this act his life was saved, for the workmen finding the cord fresh cut had evidence of their companion being still alive. The hole through which the upper part of the cord was withdrawn permitted some sand to descend, but, happily, a stone soon blocked up the opening, and prevented the suffocation of the unfortunate prisoner. His position in the well is thus described: "I was on one side of the well, my back turned towards the earth, and over my head the broken earth and sand, which continued for some time to fall upon me to the quantity of a good mètre." His legs were much embarrassed by this circumstance, and he was under the necessity of treading the sand under his feet; but by this accumulation the extent of his abode was being reduced, so that on the third day he became exceedingly exhausted from the continued curved position to which he was necessarily reduced. His right leg was bent under him, and his left extended by the side of the basket, the foot being placed in a hole between the two planks. His right knee was lodged under the calf of the left leg; his body bent or rather folded up, the left shoulder being applied against two planks of the tube or drum, near the hoop which retained them, and his head lowered towards the left shoulder. His arms were partially free, and could be moved about the distance of half their length. His head touched the planks above, forming the roof of his vault, and during the whole of his stay in this melancholy situation he was sensible of the breaking down of the wood from the weight of the superincumbent earth. In this painful position he suffered greatly from his knee being in contact with the iron hoop of the upper part of the basket. The cold, he says, occasioned him the most acute pain, to alleviate which he cut off several portions of his garments, and placed them between the limb and iron. During eleven days was this poor fellow constrained to preserve this position; the space was too small to admit of any change. Air entered into this abode by means of the hole through which the sand had been infiltrated.

On the Saturday (2nd day) morning, at two o'clock A. M., he heard some one call from above, and he replied by directing them to seek for him on the side on which he was lodged, calling at the side of the cherry-tree which grew near the mouth of the wall. It was on this side that a hole was found, through which the air gained admission. Dufaret had good courage; told his companions he was not ill; but they must be gentle in their endeavours to release him, for that the sand on that side would pour upon him in a shower.

He cut off portions of his clothing to stop up the holes between the planks, which admitted the sand. He asked for drink. He was hungry; but his thirst was most oppressive. He had already four times drank of his urine, which he collected in his hand; but that seemed only to augment his thirst. He desired that a string should be lowered to him, by which he attached his purse and his earnings, and sent them to his wife. The string was drawn up, and he became tranquil. At six o'clock in the morning of the *second* day a phial of liquor (of what description is not stated), was let down to him. He describes it as having been very good, and doing him much service; but he says it was too small a dose. On the *third* day some broth and some wine in pint bottles were furnished; but he needed something

solid, and he devoured the corks in the bottles. The bottles he afterwards received had no corks; they were closed with vine-beans, and those he also eat, and was rendered more at ease. He says that he felt certain he should be delivered. Hope did not forsake him. He had no ill beyond that arising from his fatiguing position. Head-ache only when he had gone a long time without food. On the *seventh* day he had some cold broth; but this gave him the colic and purging. Some remedies for this were transmitted to him, and he was well in two days. A phial of *Eau de Cologne* was let down, but it was too stimulating for him; it stupified him and increased his head-ache. A blister on one of his toes annoyed him; he opened it with his knife, and was relieved.

No light gained admission; but during a portion of the day he thought the place less sombre than at others. He was distressed by the odour of his evacuations: these, for a time, he continued to bury in the sand with his right hand; but he was unable to continue to do so for any length of time, as he was so constrained in his movements. He says he counted the days and nights by means of a fly, which was the partner of his captivity. It must have been a large fly, for it buzzed strongly. On the first day it buzzed around his head. At night (as he supposes) the insect was silent. He appears to have been right in his calculation, for, on the Saturday morning when he was first spoken to (which was at two A. M.), he had not heard the fly, nor did he hear it for some hours after. Each succeeding day the fly came on his head, on his hands, and on his food, which consisted of bread and meat cut small, soup of rice, and vermicelli and wine. The fly took his portion, flew away, and would return again in a few moments. Ah! says he, how many times have I exclaimed "*Heureuse mouche, que je voudrais etre comme toi pour passer par cette petite ouverture.*" The company of the fly was to him a great consolation.

On the *third* day he solicited a bag to fill with the sand, and send to the surface of the earth. This he was obliged to discontinue on the succeeding day, as it seemed to break away the earth too much, and allowed more sand to descend. His companions communicated to him that some sappers belonging to the corps of engineers were engaged in making a well behind him, which much satisfied him, as they had chosen the right place. When they had worked near ten feet, he heard the first blow of their instruments, and all that followed. His comrades had commenced making a gallery to arrive at him, but the earth gave way, and they had difficulty in escaping. He recollected some noise, but could not distinguish its nature. He was not sensible of this misfortune. As the work for his deliverance proceeded, the hole serving for the admission of the air became reduced, and his breathing was much oppressed, and on the last day it was exceedingly short, and he says had almost ceased. He could hear the soldiers labouring to release him; he held conversation with them, and heard the sand fall which they took away. All at once, upon turning his head he beheld a lighted candle. That moment was indeed most precious; but the cold air which was now admitted was so painful to him, that he was obliged immediately to withdraw his head from the direction of the opening. The lieutenant of the sappers desired him to look at him through the hole; he did so, but the cold air compelled him to withdraw. From this hole he was taken into the gallery, which had been very ingeniously cut by the sappers, from a well parallel to the original one in which the misfortune had occurred. He was placed on some hay, and almost immediately slept for a few instants. He was saved, and restored to his family. All praise is due to the authorities of the place, and the brave soldiers who, together with the attached comrades of the unfortunate Dufaret exerted themselves with a zeal and a devotion worthy of such an object,—the rescue of a fellow-creature from death. Dr. Bienvenu received him; his skin was moist, his pulse was full, and rather accelerated beyond its natural degree. He was full of gratitude. He was removed to a neighbouring house on a litter, covered by the great coats of the soldiers, who claimed the honour of carrying him. The transport had in it something of a triumphal character. Dufaret was now put into a warm bed; he felt fatigued, and was depressed. Some warm soup was given to him, and his pulse, which had sunk to forty beats

in the minute, regained its usual number. After an affecting interview with his wife he fell into a profound sleep, which was, however, disturbed by frightful dreams; he might indeed be said to

"* * * Wake emerging from a sea of dreams tumultuous."

He was assailed with cramp of the legs, thighs, and loins. His sleep was thus constantly broken, until an abundant perspiration relieved him. His feet were not swollen, which was remarkable, and there was only a slight excoriation of the right foot. Between six and seven in the morning, the doctor opened his window, and Dufaret could have exclaimed with Solomon, "It is a pleasant thing to behold the sun." Oh, said Dufaret, "*qu'il-y-a longtemps que je n' avais pas vu le soleil!*" The clothes, or rather the remnants of those in which he had been habited, were removed from him; they were loaded with particles of sand sticking to him with a coating of greasy perspiration. He made no complaint of pain. He took a bath, and with care and attention was speedily restored to health.

This interesting detail naturally gives rise to some physiological reflections. That which appears most remarkable either in fact or by an omission in the narrative (which, from the precise and circumstantial manner in which the account is given, is not at all likely) is the entire absence of sleep during the fourteen days Dufaret was entombed in the well. No notice whatever is taken of this subject, nor does he appear to have suffered from the want of

"* * * Nature's sweet restorer, balmy sleep!"

Elizabeth Woodcock, buried in the snow, near Imprington, in Cambridgeshire, in 1799, for nearly eight days, slept very little during the first night, or indeed any of the succeeding nights or days except the 8th.* Mr. Okes also alludes to a case communicated to him by a gentleman in Devonshire, of a young man buried under the snow for fourteen days, who did not recollect that even once, during the time of that confinement, he had any sleep.†

The extraordinary courage of Dufaret would seem to have overcome all the ills attendant upon watchfulness and anxiety—anxiety of the most painful description, arising from what must be regarded as a constant apprehension of death.

The man, however, says he did not despair at any time of being released, though he was alive to his perilous situation, as is shown by his efforts, necessarily very limited, to exclude the entrance of sand into the small space in which he was doomed so long to be confined. The influence of Hope

"The balm and life-blood of the soul,"

and which of all passions may justly be said "most to befriend us here," is very apparent in this case, and served doubtless much to protect him against the attacks of disease.

"Our greatest good, and what we least can spare,
"Is Hope: the last of all our evils, Fear."

Thirty-six hours appear to have been the greatest extent of time to which Dufaret was reduced to the necessity of living without drink; but during even this comparatively short period, the torment of thirst was most distressing, indeed, so great, that he was urged to supply himself by drinking four several times a quantity of his own urine. The saline nature of this secretion, however, served but to augment his thirst, and he was obliged to desist.

This corresponds with the account given of the poor wretches confined in the memorable black hole at Calcutta. Mr. Folwell states, that in an ungovernable fit of thirst, he was tempted to drink his own urine; but it was so intensely bitter, that a second taste could not be endured.* Hunger and thirst are the most powerful and impatient of all sensations; but the latter is by far the most oppressive. The seat of it is in the tongue, the fauces, the œsophagus, and the stomach. The salivary secretions become acrid and too pungent from a deficient supply of aqueous matter, imitate and produce thirst. The exhalation going on from constant perspira-

* Account of the Providential Preservation of Elizabeth Woodcock, who survived a confinement under the snow of nearly eight days and nights, by F. V. Okes, p. 39.

† Page 25.

* Annual Register, 1758, p. 278.

tion exhausts the blood of its aqueous parts. Dufaret had a moist skin when taken out of the well (*sa peau etait haliteuse.*)

Solid food appears necessary to the easy performance of the function of digestion. A supply of fluid nourishment in a quantity adequate to the demands of the system, is not competent to this without the aid of solid matter. This is in accordance with what is known relative to this function of assimilation. Quality and quantity of food is necessary to perfect digestion; a certain degree of distension is necessary to the horse, who is said to require 16 pounds of hay daily, to keep up such a degree of distension as is necessary to impart to him his natural grade of strength and life. Food of a stimulating quality, supplies the place of distension; salted meats answer this purpose best; various indigestible matters have been known to exert a stimulus on the stomach, and thereby have a material influence on animal life. Many animals take into their stomachs indigestible substances, which produce this effect, and enable them to support journeys of amazing length, the camel, ostrich, &c. Dr. Rush mentions that chips of cedar posts moistened with water, have supported horses for two or three weeks, during a long voyage from Boston to Surinam; and the indigestible cover of an old bible, preserved the life of a dog, accidentally confined in a room at Newcastle-upon-Tyne, for 20 days. Dufaret was compelled to eat the corks in the bottles of food transmitted to him.

The admission of cold air to the surface of Dufaret's body, which had for so many days been accustomed to a very different temperature, is remarkable; but it corresponds with that which has been experienced by others who have met with somewhat similar accidents in mines, coal pits, &c. Elizabeth Woodcock felt excessively from the admission of cold air into her snow hut; her sense of hunger ceased after the first day; thirst was her predominant feeling, and this she could gratify by sucking the surrounding snow.* The sensibility of the stomach is subdued by a continued increase of temperature; in cold weather the digestion is most rapid; *fames canina*, is said by Plutarch, to have been produced by the application of cold to the skin. Mental emotion, it must also be recollected, retards the progress of digestion.

P.

* Okes's Account, &c., p. 9.

PUBLIC EXAMINATIONS.

THE manner in which the examinations will be conducted at the New University ought to be a matter of most serious consideration.

In all our public seminaries, and in all scholastic establishments of modern Europe, the examinations which are instituted for granting academic honours are conducted publicly, so that any other system, or one wherein the utmost privacy is followed, must be regarded with suspicion.

One striking feature in the examination of candidates for a diploma or license of the Royal College of Surgeons in Ireland, and which characterises it from all other medical examinations in the Colleges and Universities of England and Scotland, is its being *public*,—so that when a candidate for "*letters testimonial*" presents himself, the doors of the examination hall are thrown open to the members and licentiates of the college, all of whom are entitled to be present. The advantages attending this PUBLIC EXAMINATION, both in the court of examiners themselves and to the candidates, do not rest upon mere theoretical speculation, but have been *tested by the experience of many years;* and we are convinced that no one instance can be adduced of its inefficiency, neither has there ever been a complaint made by rejected candidates, which, there is no doubt, would have been made if there were any fair or reasonable grounds. It is true that some few individuals have been rejected by this body, who have had the manliness to protest, in writing, against the *style* of examination; and one of these, William Bennett, the translator of Bayle's Anatomy and of Tiedeman on the Fœtal Brain, gave an account of the ridiculous "anatomical quibbles" which some asked him on his first examination; and afterwards on his second examination, when he appeared on his "*appeal.*" But

although William Bennet, and also Mr. Cross of Norwich, a name well known in the annals of medicine, had in all probability fair grounds to complain, yet neither attributed any blame to the *public method* in which their examinations were conducted.

Secure in the presence of his professional friends, the candidate takes his seat. The greatest kindness and urbanity is shown him by his examiners, and every pains are taken by them to sift the extent of knowledge which the candidate possesses. The method of doing this is far, however, from perfection; but, on the contrary, consists of what are called *cruxes*, and the *particular opinions* of those Hospital Surgeons who form the Court, and whose interest it is to have those opinions learned at their *own hospital*, for which they receive from the student the sum of twelve guineas for six months, or thirteen guineas for one year's attendance.

In some cases at the Dublin College, where gross ignorance has been detected, and impudence on the part of the Candidate has been attempted to screen it, no kind of annoyance has been experienced by any member of the Court, and consequently, there has been no attempt at retaliation; at all events, if such a feeling should ever exist, the presence of those assembled will not fail to keep it in abeyance. Whilst we applaud the sister College on its system of *public examination*, we cannot help contrasting the advantages the Dublin College thus possesses over the "hole and corner" inquisitorial proceedings of the Courts of Examiners in Lincoln's Inn-Fields. No time for such an enquiry can be better suited than the present, when a great Metropolitan University is about coming forth into existence, possessing amongst other powers, that of granting medical degrees, and purporting to be based on the most *liberal* foundation.

It has often happened, that at the *nightly* examinations of the Lincoln's-Inn-Fields College of Surgeons, by the very inefficient and corrupt body who conduct them, many candidates have been rejected, whose qualifications as anatomists and surgeons, were of no ordinary kind, and that on the contrary, many—nay, *very many*, have received the diploma of that body, into whose hands we would have had some hesitation in placing a common *bleeding lancet*. Farther, it is a well known fact, that when as many as ten Candidates, the usual number which are examined at *one nightly* sitting, some are passed who have been before the Court only *ten minutes*, whilst others are as *hastily rejected*; the ordinary time allowed for examining a Candidate being from twenty to thirty minutes. Can any man with the slightest pretensions to common understanding, contend for a moment that in *any* of these cases sufficient time is allowed to test the knowledge which any individual possesses? Certainly not! Take the case of *ten minutes*, it may be replied, as it has been upon several occasions, by individual members of the Court of Examiners, that "the candidates' few answers were so gross, the Court could not in justice pursue the examination." But the very reverse proceeding should have been acted upon; allowances should have been made for timidity and excitement which every candidate more or less has to contend against, and instead of *mulcting* the unfortunate student further, by enforcing him to attend a *recognized hospital* for six months, and certain *rocognized lectures*, he should at last be granted the power of an *appeal*, or be remanded for an hour, or some proper period, whilst the other Candidates are being examined, or at farthest for a *week*, when if he still persisted in not satisfying the Court with his answers, with some show of reason they might remand him for six months. One case is worth twenty arguments. A gentleman, last year, presented himself for examination, he was not asked a single question upon surgery, and a bone was placed in his hands, to show "of two tuberosities, which was the largest," a feat which the veriest clodhopper from the tail of the plough would have felt no difficulty in pointing out, for one was *three times* the size of the other! This gentleman's nervous state before being called in, was remarked by all his fellow Candidates, and it was so encreased before the Court, that he actually shook: yet he was turned out after five minutes *probing*. The very same evening, a smart dapper candidate for surgical honors, who has been known since to have boasted of *his want* of practical anatomical knowledge, was passed in as short a time as the former was rejected, and still rejoices in his tale of having

"done the College!" The *innervated* condition of some of the Examiners from *after dinner causes*, is too notorious to require comment; yet in this state they have been allowed to trifle with the feelings of the Candidate, and cases are also on record, where Candidats have been rejected for holding peculiar opinions on certain disputed points, and upon enquiring the cause of their rejection, were told "their manners were disrepectful!"

The good nature of some of the examiners has also repeatedly interfered with a due regard for the safety of the community, which indeed should be the only motive to guide medical examinations. Thus an aged gentleman presented himself, some few years since for examination, and was very justly rejected. This man knew as much about the anatomy of the human frame as he did of the longitude! and positively could not tell whether the fibular artery was in the leg or the belly! so that, as we have already said, he was deservedly rejected. But he waited patiently until the Court was about breaking up, and until Sir Astley Cooper was making his exit from the hall, when the Baronet's attention was attracted by a tone of sobbing. Upon turning round he perceived the rejected candidate, with his handkerchief to his eyes weeping loudly. Sir Astley asked him "What *do* you know?" to which our hero boldly replied, "Something practical! such as scarlatina, or measles!" The kind-hearted Baronet again took him into the hall, and asked a few questions, and he was sworn to uphold the dignity of the College! These authentic cases in themselves, independent of numerous others, furnish incontrovertible arguments in favour of *public examinations.* Inefficient individuals dare not be passed,—the whims of the examiners dare not be exercised, *sobriety* and good conduct would alike influence the examiners and the pupil; but above all, the welfare of the community at large would be protected.

Nor does the worshipful association of *Rhubarb Hall* furnish us with fewer proofs of the inefficient working of *their* present method of conducting examinations with *closed doors.* This body, totally regardless of gentlemanly deportment towards candidates, and from its careless, slovenly, and inefficient manner of hoaxing, bewildering, and tormenting those whose misfortune it is to be compelled by the existing laws to undergo its ordeal, pursues its inquisitorial proceedings in a manner ill-calculated to ascertain the extent of knowledge which the student possesses, and consequently commits the grossest mistakes in its selection of pupils worthy of receiving its certificate: so much so, that were not the *true* causes of its inefficiency well known we would be uncharitable enough to suppose that partiality, or even *some worse motive* guided its decisions.

Innumerable individual cases of unjust rejections, or rather of rejection of candidates by this inefficient or corrupt body, whose acquirements we know to have been at least *equal* to many of the examiners themselves crowd upon us. But without further referring to these, except that very remarkable *public* case of injustice, which drew together so large and so respectable a meeting some time since at the Crown and Anchor Tavern; the numerous despicable productions in the shape of "*grinding manuals*" which are to be found in the hands of every student, whose misfortune it is to be obliged to become an apothecary—and these compiled by men of ability, not for the purposes of suiting the *intellects* of the STUDENTS, but of that of the EXAMINERS, a task which in most of them is executed with great tact and discrimination, are sufficient records in themselves of the *kind and extent* of information required from candidates, by the *worshipful company of ipecacuanha hall!*

We would not lay so much stress upon this point, did we not know that many students, ignorant of their profession, incapable of conjugating *amo*, or of declining *musa*, are yearly palmed upon the public by this association as being expert practitioners, and wonderfully profound in the depths of Latin lore! and who succeeded in passing its ordeal *solely* by the assistance of these *disgraceful* and *disreputable* publications. Not to mention the *superficial* smattering of *every thing* which is necessary for a candidate to succeed at Apothecaries' Hall, and with which he *will* succeed, we content ourselves with instancing those *classical productions!* called "interlineal translations" of Celsus and Gregory, which run in this style: *et* and, *cum* when, *animus* the mind, *est* is, and so on, from one end of

the book to the other. Besides this required *pseudo*-information, disgraceful alike to the candidate and the court, the method of *conducting* the examinations is even worse. Two or even three candidates are examined at the *same time*, by different examiners; and these examinations take place in different quarters of the room; the examiners not employed being engaged in walking to and fro from one candidate to another, so that an incessant cause is in operation to *divert* the attention of the candidate from the object for which he presents himself; and in almost every instance these *diverting pedestrians* take special care to attract the attention of the candidate, doubtless with the view of impressing him with a due idea of their *importance*, either by sitting opposite to him and staring him full in the face during his endeavours to unravel one of their profound interrogations, or *more* offensively sneaking behind his chair, leaning upon it, and thrusting his head within a few inches of the candidate's face. Without attempting to defend the very wrong course which Mr. Penruddock adopted on a late occasion, we have little hesitation in saying, that this young gentleman would never have been betrayed into the commission of the act he was guilty of, if a more *gentlemanly* and less *irritating* deportment had been observed towards him, and which nothing but a PUBLIC EXAMINATION can *always* ensure.

It is for these reasons we anxiously press upon the council of the new university its adoption of the *public method of examination*. The gentlemen composing the Medical Senate, who of course will be the examiners, will have little to dread upon their own parts by adopting *public examinations;* their characters, as scientific and able men, are too well known to the public, for them to have any fears of *their ignorance* being exposed, whatever feelings of this kind might influence the *two learned* bodies we have spoken of, who conduct their examinations in the HOLE AND CORNER METHOD.

A REFORMER.

Tooley Street, Feb. 15th, 1837.

THE NEW OPERATION FOR HYDROCELE.

WHATEVER may be the importance or credit due to the inventor of the new operation for Hydrocole by *acupuncturation*, we have thought it worth while to place together the pretensions of each of the surgical *triumviri*, and the mode which each has employed to substantiate his claims, will, if not very instructive, be amusing to the professional reader.

No. 1.

MR. LEWIS'S PLAN OF PUNCTURATION FOR THE CURE OF HYDROCELE.

BY T. KING, ESQ.

Hydrocele, although not in itself a disease and which is often dangerous, is still *inconveniently* painful. An accumulation of water in the tunica vaginalis is a drag upon parts which, from their structure and tenderness, require rather to be supported than *pulled upon*. It is one of frequent occurrence: it affects a large proportion of the *male* community. On these accounts it is entitled to earnest attention. But it is *especially* interesting, that being a small dropsy, it admits, with comparative safety, of the trial of new remedies. Besides, a treatment somewhat experimental is the more justifiable here, as it may lead to *great* results in the management of disease of the same nature, from its seat and extent far more formidable and serious. But such is not the plan which *we* have to describe and consider; for experience seems already to have decided of its usefulness, its painlessness, as well as of its perfect safety. *We* purpose, however, examining it in these respects, in comparison with the methods hitherto adopted, in order to clear up, so far as *we* can, all doubts on the subject.

If, as *we* understand, the circumstances which led to the invention of this plan are *somewhat* accidental, *we* must admit that its author has shown the value of observing attentively the processes of nature on all occasions, whether called into action by accident or otherwise. Indeed many an accident and many an error, well observed in their *effects* and *consequences*, have led to useful discovery in Surgery, as well as in other departments of science.

The operation consists in what Mr. Lewis calls puncturation of the tunica vaginalis—in carrying a common sewing needle through the skin, dartos and cremaster, into the bag containing the fluid; a drop of this follows the instrument as it is withdrawn, and shows itself

like a tear on the integuments. It is performed in nearly the same manner as the ordinary method of tapping with a trocar, except, that the needle, which should be oiled, cannot be plunged in so easily as that instrument. It sometimes requires to be rotated between the finger and thumb as it is pressed through the different tissues it has to traverse. The same precautions are necessary to ascertain the relative position of the testicle and the fluid; which, omitted, or entrusted to *any but a surgeon*, would make this operation dangerous, inasmuch as the testicle would be exposed to injury. It is important also that the operator should grasp that part of the tumour formed by the dropsy as much as possible apart from the testicle, so as to be able to give, by pressure, that tenseness to the skin which is necessary for the easy penetration of the instrument. This he should continue to do while he withdraws the needle, to which, in its passage out, he should give some rotatory motions *on its axis*. The removal of the needle will leave one drop of the liquid from the tunica vaginalis on the skin. The appearance of a drop of the fluid at the top of the little wound is the test of the operation being well performed. It is a demonstration that the bag has been perforated, and that its contents can find their way out; and should it not take place, another puncture must be made. Care must be taken to press in the needle perpendicularly, and to rotate it well after it has entered the tunica vaginalis; otherwise the opening will not admit of the passage of the fluid from it.

After the operation, a compress moistened with a discutient lotion, may be kept on the scrotum, and the patient may walk about or take rest, as best may suit him.

The phenomena which present themselves in a few hours are very remarkable:—The swelling begins to be less circumscribed, and to lose its tenseness, and the cellular tissue of the scrotum becomes gradually more and more infiltrated with the fluid which before distended the tunica vaginalis, and which in the space of from twenty-four or forty-eight hours, will have entirely changed place. In five or six days this infiltration disappears, and the patient is cured. These effects explain the process by which a cure is obtained.

This process well deserves attention. It appears that the fluid very gradually oozes from the serous sac into the cellular tissue, making its way from one cell to another, till at last anasarca of the scrotum is substituted for the circumscribed dropsy of the tunica vaginalis. At the same time that the cellular tissue is filling, the serous sac gradually returns upon itself—an effect of the utmost importance as regards the ultimate result; for it appears that by this gradual contraction it loses more or less completely the condition necessary for the reproduction of the fluid, and yet remains inclosed, so as to exercise its proper functions. Probably the contraction is not wholly active—is not alone the result of the contractility of tissue belonging to the tunica vaginalis combined with the action of the cremaster muscle. We believe the pressure of the fluid may have something to do with it; for be it observed, the liquid, once out of the sac, presses on its exterior, and becomes an obstacle to its future distension. Each drop, as it oozes from the bag, becomes a force which helps to squeeze out that which is to follow: and thus has Mr. Lewis achieved a victory perhaps never before gained, by making the product of a disease battle against the disease itself.* Once distributed in the cellular tissue, the fluid is quickly removed by the absorbents.

We wish now to recommend this operation to the consideration of the profession; first, as regards the treatment of hydrocele, and in comparison with other plans of cure; and, secondly, as regards the effect which the physiological fact it reveals may have on the management of more serious dropsies, and perhaps of some other diseases.

The striking, the paramount advantage of this plan, if we have judged correctly of its mode of action, is, that it effects *a cure* by restoring the diseased organ *to its natural state*. It realizes the principle of sound therapeutics—that the first object in the treatment of disease should be, not to obviate its inconvenience by inducing an unnatural, permanent alteration in the affected

* The principle here so well illustrated, is the same as that of the operation successfully performed, some years ago, by Dr. Cumin of Glasgow, with a couching needle, for the cure of ganglion, and described in the *Edinburgh Medical and Surgical Journal*.—[EDIT.]

parts, but to bring them back to their original state. Almost all the other methods of cure act in an opposite manner, and substitute an artificial for the primary disease, another, (minor if you will,) but still a disease. They close up the tunica vaginalis permanently, by gluing its sides together: they rob an important organ of an important part of its apparatus, by converting its serous investment, destined among other purposes to surround it with an atmosphere of fluid, into a thick, dry, useless, perhaps injurious, artificial membrane. These are not imaginary evils. Without appealing to experience, which tells us they are not, we think no one will maintain that the serous bag is not useful, almost unnecessary to the preservation of the testicle in a state of integrity; and, if thus indispensable, to close it must be an evil of rather a serious nature. In every other respect, this plan is superior to the others. It is perfectly free from pain and danger, and nothing can equal its simplicity. Compared with it, the methods of treatment by incision, by excision, by seton, or by any mode of provoking adhesion between the sides of the tunica vaginalis from irritating them with a solid body, will not bear mention. The plan of cure by injection, although far less objectionable than these, is still inferior to that of Mr. Lewis. As we have stated, its principle is bad, inasmuch as it induces permanently an artificial state in an important organ. It leaves the testicle deprived of its natural atmosphere. The inflammation it produces cannot be regulated with certainty, and sometimes becomes dangerously intense or extensive, or excites sympathetically serious disorder in important organs. This objection must have great weight, when it is considered that the testicle itself is often influenced by the state of the tunica vaginalis; and, when sound previously, is often left chronically enlarged after the injection. It is not always successful. It subjects the patient to some pain, and requires that he should be confined for many days or several weeks.

The only objection we have heard against the method of puncturing with a needle, is, that it may not be efficacious. To this Mr. Lewis answers, that he has found it uniformly successful. We will, however, admit that it may fail in some instances. If so, its failure will probably be limited to those cases in which the tumour is very large, and the tunica vaginalis excessively distended. Here it is not unreasonable to expect that the sac will not contract sufficiently at once to prevent a fresh effusion. But the objection is at once obviated by the fact, that the operation can be repeated as often as may be necessary, without the slightest inconvenience, and that each time the bag will contract more and more; and if less and less fluid be allowed to accumulate before each fresh puncture is made, the disorder will probably be less likely to return than in some cases less formidable, cured by one operation.

I am disposed to believe, with Mr. Lewis, that his method will effect a radical cure of hydrocele, not only from pathological considerations, and the success he has already obtained, but also from its result in a case I myself lately operated on, and in which he kindly gave me his assistance.

If, however, contrary to our expectation and belief, further experience should prove it to be inefficient in producing the *radical* cure, as a *palliative* measure it would still be invaluable.

The other part of the subject—whether or not this operation, with or without modification, may be applied successfully to the treatment of other cases than hydrocele—we shall probably discuss at some future time. We wish, however, to be allowed to express our opinion, that, as far as we are able to judge, it may be fairly tried in other dropsies.—*Annals of Medicine.*

No. II.

The reply of Mr. Travers to the above memoir of Mr. King's, is particularly deserving of attention from the insolent manner in which he has alluded to Mr. Lewis's name, as well as to the prolixity, verbosity, and almost unintelligible character of his communication to the disreputable journal to which he was one of the original subscribers. Mark the affectation of this *pure*, thinking it necessary to state *that he found* the *Annals of Medicine* lying on a friend's table, and *that he was informed by a pupil of Mr. Lewis's operation having been described in the Lancet.* Endless numbers of *my*'s and *I*'s which almost occur in every sentence, and do not fail to take notice of

those inelegant and ungrammatical sententences which we have marked in italics; in particular let us also call the attention of the reader to the 2d last paragraph, which may be considered as the *ne plus ultra* of the confusion of ideas; lastly let the reader observe the impertinent allusion Mr. Travers makes to the result of Mr. Lewis's practice, adding that it " will soon be correctly appreciated by *my colleagues*, the *surgeons of hospitals*."

ACCOUNT OF A METHOD OF OPERATING FOR HYDROCELE.

Sir,

In the first number of a new periodical, entitled " The Annals of Medicine," which I saw *lying on a friend's table* a few days ago, is an account of an operation for hydrocele *invented* by a Mr. Lewis (mark, reader, the insolence of a Mr. Lewis), with observations by Mr. King, lecturer at the Blenheim Street School of Medicine.

Having been *in the habit* of performiug this operation publicly in the wards of St. Thomas's Hospital for nine months past, and never having heard or read of such an operation prior to *my* performance of it, *precisely in the manner described by Mr. King*, I had regarded *my* claim to the priority as established, and waited only the time requisite to test its real value, before submitting the *matured* results to the profession. I ought, however, to mention the following fact. On Saturday, May 6th, a fortnight after *my* performance of the operation with the acupuncture needle in the presence of the pupils with a satisfactory result, a letter, as I was informed *by one of them*, appeared in the Lancet, describing the exact processs, as Mr. Lewis's new plan of treating hydrocele.

In the summer of 1835 I first *conceived* the opinion, from an observation made in private practice, in a case of old hydrocele simply punctured, that the puncture of the tunica vaginalis would be followed by an inflammatory change of the contents of the sac from a serous to an albuminous secretion. In lecturing on hydrocele in the surgical course of the ensuing session, 1835-36, after describing and *canvassing* the various modes of treatment, and giving a decided preference over these to that of Sir James Earle, I mentioned the particulars of the case alluded to, and the opinion I had formed, and stated the probability that this more simple method of treatment might be found effectual, but that time, and extended observation and careful comparison of results, would be necessary to show that it was as little liable to failure as the operation by injection. In the spring of 1836 I commenced the practice of the operation; first, making a single puncture with a trochar; secondly, with a fine sharp-pointed probe; thirdly, with an acupuncture needle of the largest size; and then planting several punctures at equal distances, according to the bulk of the hydrocele. A drop or two of fluid escaping at the several needle orifices, a rag dipped in cold lotion was laid on the part, and the *general* result was more or less œdema of the scrotum, and in three days a total disappearance of the swelling. I soon ascertained that it was not by adhesive or any other *mode* of inflammation that the change was effected, but that the tunica vaginalis was left perfectly free and natural in its relation to the testis, and the scrotum of its proper weight, size, and figure, so that relapse was more to be apprehended.

I was at first impressed with the idea that the tense condition of the tunic was essential to the curative effects of the puncture, and thus explained the difference of result from that obtained by complete evacuation and collapse of the sac. But this opinion I have had occasion to modify, finding that a freer discharge than could be obtained by the round needle, and the consequent partial collape of the sac, was on the contrary more immediately and certainly productive of the infiltration of the cellular membrane, and consequent absorption of the fluid. I have therefore since employed a very fine trochar, smaller than any in common use, as the preferable instrument. *My mode* of proceeding is to put the scrotum on the stretch, in front of the testis, by embracing it with the extended thumb and fore finger of the left hand; and placing the patient opposite a window on which the sun falls, or at all events a strong light, I command the view of the transparent bag so perfectly as to avoid veins and any point of accidental adhesion or thickening, which is always marked by a corresponding opacity. The punctures are made in a perpendicular direction and in quick succes-

sion, about equi-distant from each other, while the tunic is kept tense by graduated compression. Of several cases thus treated some have remained cured; others, apparently cured, have relapsed after a fortnight or three weeks, and one after three months; but I do not consider this a fair criterion of the value of the practice, because from the shape and size of the acupuncture needles chiefly used in these cases, the points on which I believe the success of the operation mainly depends were not accomplished. These are, a freer collapse of the sac by the removal of a sufficient portion of the fluid which the trochar puncture ensures, and the more complete diffusion of the remainder into the surrounding cremaster and cellular tunics, obtained by the multiplication of the punctures, while the tension of the sac is preserved.

On the third day the fluid is absorbed, and the two sides of the scrotum are uniform: indeed this is sometimes the case on the second day; but if the punctures are so small as not at once sensibly to reduce the bulk of the swelling, a single drop only exuding at each orifice, the reduction is generally much slower, or even fails altogether. Now every body knows that the drawing off of the fluid of a hydrocele through a canula is almost invariably followed by its reaccumulation, and it is not uncommon for elderly men, who are timid, or averse to injection, to call upon their surgeon to have the tunica vaginalis relieved of its contents once in a year or in two years.

Assuming that the simple puncture as above described is in a certain proportion of cases a permanent cure, to what is the difference of result attributable? This is a fair question, and not as it appears to me very obvious of solution. But it is needless to conjecture about the *modus operandi* of a supposed remedy, or to discuss the advantages, real or comparative, of an hypothetical cure. Let the *premises*, therefore be well ascertained.

I may mention two probable sources of fallacy as to the facts; first, the want of a sufficient interval of *time* and extent of observation to establish such a difference of result; and secondly, the false impression which the surgeon receives from the disappearance of the fluid, in whole or in part, by absorption, that it is the institution of a curative process, instead of a natural and necessary result of the effusion of an innocuous fluid into the cellular membrane. I confess myself so far unprepared to decide the fact of a permanent cure, that it seems *idle to set about* the rationale.

Negatively, the question when we are *ripe* for it, might be reduced by observing that there is no evidence of inflammation following the transfer of the fluid from the tunica vaginalis to the cellular membrane, in either texture, and the effused fluid is too rapidly absorbed to operate with any permanent effect in the way of compression, thus converting the disease into the remedy. The puncture is the same whether the canula is employed or not, so that in fact the only difference in the circumstances of the two cases is that between the *gradual* and the *sudden* evacuation of the sac of the hydrocele.

What is essential to justify the conclusions so readily adopted by Mr. King, is, evidence of a *positive* process by which the disease is not only removed for a time, but removed altogether. The second part *of the action* is wanting—the removal of the fluid, artificially or naturally, or by *a half and half* process, *falls far short of the cure;* and it is *à priori* against the probability of cure, that the parts are left in a perfect state, and that no impediment consequently presents itself to the recurrence of the dropsy, which is confirmed by all *analogy* and *pathology* of dropsies. Otherwise I grant it is easy to *see* and point out the advantages of a perfect as of a *morbidly* altered condition of parts after operation, and to enumerate *other* disadvantages attending *other* successful modes of proceeding as compared with *this*, if *this* be equally so, but the superiority of *the method* as well as the *theory of cure*, may as well be deferred until *the fact* is placed beyond doubt. Mr. Lewis, indeed, says, May 7, 1833,) that he has tried the plan of single puncture with a needle for the last two years, and therefore can vouch for its success in *every* case of hydrocele. If by success is meant the disappearance of the fluid for a week or a month, or two months, I do not mean to question the statement, though *a startling one;* but if it means, what alone it *should* mean, a *radical* cure of the complaint, I can only say that this

practice has been too *singularly* fortunate to be a *safe* precedent for others, even though their cases be not *numerous*.

As matters stand, the merits of the proposal (it signifies little to the public to whom it belongs) will soon be correctly appreciated by *my* colleagues, *the surgeons of hospitals*. It recommends itself by its safety and simplicity. A similar mode of proceeding with dropsical bursæ has proved perfectly successful, when followed by pressure, and it is probable that this addition to the treatment in hydrocele for a short time subsequent to the puncture, and which though not so easy *of adjustment* may still be efficiently employed by means of a narrow roller, would be *available against relapse*.

I am, sir,
Your obedient servant,
BENJAMIN TRAVERS.

Feb. 1, 1837.

No. 3.

The following letter of Mr. Lewis, from its candour, simplicity, and beauty, is an admirable contrast to the egotistical, pedantic, prolix, and verbose effusion from the pen of Mr. Travers.

MR. LEWIS'S OPERATION FOR HYDROCELE.

Sir,—In the *Lancet* of the 7th of May last, I pointed out to the medical profession a new method of treating hydrocele, *i. e.* by puncturing with a very fine needle until a drop of water oozes out on withdrawing the needle, and in three days the hydrocele will completely disappear, no matter in what quantity the fluid might have been collected. In the last number of the *Medical Gazette*, there is a letter from* Mr. Travers, in which he seems to insinuate that he was the discoverer of that method, because he had punctured a hydrocele with an acupuncturation needle a fortnight prior to the date of my letter. That such may have been the case, I am not in a position to deny, although I must, in justice to myself, declare, that I never heard of Mr. Travers deviating from the ancient routine of practice in the treatment of hydrocele, or of any other disease. But lest the public should imagine, like Mr. Travers, that my discovery and the appearance of the letter in the *Lancet* were synchronous, I will bring forward evidence, at any time, that the operation had been performed two years before Mr. Travers *conceived* it, as he terms it. I even spoke of it in public to several medical gentlemen, who will, I have no doubt, vouch for the accuracy of the statement. It was not until I perfected the operation, and had seen many cases, that I dared to make public the extraordinary fact that a single puncture with the point of a fine needle into an encysted cavity, is sufficient to cause the absorption of the fluid contained therein. The practice of making many punctures is not only useless and dangerous, but actually less likely to succeed than a single puncture: of this the profession in general (I mean general practitioners as well as hospital surgeons) will be convinced by experience. If Mr. Travers had read my letter attentively he would have seen that I first introduced the method as a palliative cure, although I have seen cases where a radical cure was effected by the simple operation of puncturation. As the method of puncturation for the radical cure of hydrocele, differs in some respects from the palliative, as soon as I have satisfied my mind on the subject, I shall rejoice, (though an humble individual,) to contribute my mite towards the advancement of science.

I am, Sir, yours truly,
D. LEWIS.

28, Artillery-place West, Bunhill-row,
Feb. 14, 1837.

No. 4.

The following letter from Mr. Keate must be considered as putting an end to the *discovery* of this new operation for hydrocele. In justice, however, to Mr. Lewis it must be admitted, that had he not called the attention of *general practitioners* to this simple and ingenious operation for the cure of hydrocele, it might never have been brought before the public. We entreat of Mr. Keate not to think it necessary to quote the name of the physician in a matter of such delicacy. For though we are far from agreeing with Mr. Keate in his

* We have taken the liberty to omit the retaliatory *a* so uncourteously employed by Mr. Travers.—EDIT.

opinions on medical polity, and would have little faith in the assertions of *some* of his associates at Lincoln's-Inn-Fields, his own veracity and honesty are proverbial.

TREATMENT OF HYDROCELE.

Sir,—On looking over the contents of your number for 11th inst. I saw "Account of a new method of operating for Hydrocele, by Benjamin Travers, Esq., Surgeon to St. Thomas's Hospital." My hopes of gaining information naturally led me to refer to his letter, where I read the account, I must confess, with some *disappointment*, and was rather *surprised* to find that there was another claimant for the merit of discovering this supposed new method.

While I do not mean to intimate any doubt of the same ideas having occurred to each of these gentlemen without any knowledge of the other's theory or practice, or of any previous operation of the kind, I trust it will not be offensive to either of them if I assure you that the plan and the practice have been known and acted on for very many years by myself, and I dare say by others. By one other person I know it was performed I dare say *twenty years ago*, namely, by a friend of mine, who for some years practised as a physician in this town, and is now living in retirement in the country. This gentleman performed the operation on *himself*, as he was nervous about the injection, and fancied, as he said, that if he could convert ascites into anasarca, absorption from the cellular structure might cure the malady; and in his own case it was perfectly successful.

At his suggestion I tried it frequently, both at the hospital and in private practice; sometimes successfully, but more frequently the collection of fluid in the sac returned, and I generally found the patients impatient of the numerous punctures, and of the time required for the absorption. I remember talking to Sir Astley Cooper on the subject, and, as far as my recollection serves me, the plan appeared not to be new to him.

I cannot venture to mention the name of the physician in this letter, as I have no time to write and ask his consent before the appearance of your next number; but I can have no hesitation in stating it to you in confidence, or to any *gentleman* who may think it worth while to ask me.

I am, Sir,
Your obedient servant,
ROBERT KEATE.

Albemarle-street,
Feb. 15, 1837.

[The name of the physician above alluded to is mentioned in a postscript, but as it is marked "confidential," we of course abstain from publishing it.—ED. GAZ.]—*Medical Gazette.*

The London Medical
AND
Surgical Journal.

Saturday, March 4, 1837.

BRITISH MEDICAL ASSOCIATION.

THE members of the British Medical Association, ought to consider it as an event propitious of their respectability and future success, that they should have met with the reproaches and sneers of a journal which has always had the candour to profess itself to be the organ of the corruptionists—to uphold monopoly and mis-rule, and to oppress and degrade the GENERAL PRACTITIONER. Had the objects of the Association been *applauded* in that journal, it would have justly created suspicion and alarm, and the numerous individuals who are now daily coming forward to enrol themselves as members, would have had good reason to pause, at least for a while, until they had satisfied themselves that the framers of the Association were sincere and trustworthy, and that there was no danger of its great and important objects being frustrated. An additional proof of the high principles of justice and candour, for which the corruptionists offer so many examples from the very com-

mencement of its career, is presented to us in the letter forwarded to them by the Secretary of the British Medical Association, inserted in our last Number; wherein the council have charged them with injustice, falsehood, and unprofessional conduct.

Of all the objects which the Association have in view, none could have been more alarming and less acceptable to their *purer* brethren, than the idea of establishing a COURT of HONOUR. The existence of such a COURT may, indeed, be considered as quite a sufficient barrier to check the ingress of all the corruptionists into the Association, and would have been of itself a most ingenious device, though we do not believe it was ever contemplated for such a purpose, to have rendered all differences of opinion in the Council, and all disputes as to the admission of *pures* amongst them quite unnecessary.

The establishment of a COURT of HONOUR among the members of the Medical Professional, might indeed be of essential importance to their respectability and interests—and in adopting such a measure, the BRITISH MEDICAL ASSOCIATION will only be following in the path of other classes of the community. The salutary effects of such a Court is well known in the army and navy, and it is generally understood that when the Duke of WELLINGTON was prime Minister, he had absolutely prepared a Bill in order to establish a Court for the Clergy, similar to Court Martials, by which the sagacious and great CAPTAIN OF THE AGE reasonably anticipated that he would have been able to get many of the abuses of the Church corrected by their own body, in place of seeking for redress by the tortuous course and expensive proceedings of courts of law. We therefore do confidently hope, that the COUNCIL OF THE BRITISH MEDICAL AND RADICAL ASSOCIATION will not lose sight of so important an object, as there cannot be a doubt but that the Institution of a COURT OF HONOUR will prove highly useful in correcting many grievances of which individuals have to complain, and for which, under the present state of things, they cannot find any redress.

MEDICAL WITNESSES.

A JURY'S OPINION OF MEDICAL EXPERIENCE.

IN the late trial of Lord De Roos, for cheating at cards, there was so large a mass of evidence brought forward to prove that he was able to play certain tricks, that the jury unanimously agreed in their verdict. The evidence of Mr. Lawrence and a Dr. Hyde are therefore worthy of being recorded in a medical journal, as they afford undeniable proof of the opinion which an English jury have of medical witnesses. It is not, however, in such transactions wherein it is proposed that medical witnesses shall be remunerated by the English legislature.

Mr. William LAWRENCE examined by Sir W. FOLLETT.—I am a surgeon, and have attended Lord De Roos professionally. I first attended him in 1829, He was labouring under sore throat and other ailments of no importance. I have continued to attend him at short intervals to the present time. He has been labouring under a painful affection of the bones of the joints. He was first affected in 1832; perhaps before that. He has suffered very severely from the affection I have mentioned. It has deprived him of rest, weakened his appetite, and reduced him altogether. All the parts affected have been rendered very stiff, including the upper parts of his body, especially his hands, and fingers. For a long time they have been very weak and stiff, and are so at this present time. His hands are so weak that he cannot grasp

firmly, and the joints are generally stiff and want pliancy. It has affected his bodily appearance. He does not walk upright, but he does not stoop so much now as he did some time ago.

By a juryman.—The present state of his joints is rather stiffness from former disease rather than from active disease; but since 1832 he has suffered either from the effects of a former or a present disease, and it is permanent.

Dr. HYDE, examined by the ATTORNEY-GENERAL.—I am a physician and have attended Lord De Roos for fifteen years. In 1835, he was a very ailing and infirm man, and he was bent nearly double, and had a swelling of the joints. In sitting he leant forward from debility. He has had a swelling of the joints, which has left great debility of the parts. There has been a stiffness in his hands, and he has had frequently swelling of the joints in them. I attended him in 1834 and 1835. He had a constitutional debility. It was physically impossible that he could perform any feat that required the exercise of ordinary force on account of the debility of his joints, I saw Lord De Roos in 1836, but he was not then under my care. He appeared an infirm person.

Cross-examined by Mr. THESIGER. I don't think his hands were in that state to prevent his dealing the cards, but he could not deal with dexterity. He could put the cards one upon another. is easily practicable for a very infirm person to mark a card with his nail.

Re-examined.---I have heard of conjurors being able to neutralise the cut by a trick called *sauter la coupe.* I think Lord De Roos could not do that trick. He could deal the cards, but I don't think he could perform any legerdemain trick.

THE LATE DR. TURNER.

MUCH anxiety was excited in the minds of the friends and pupils of the above eminent individual, when it was made known that a post mortem examination was to be performed; particularly as much contrariety of opinion existed amongst his medical attendants and friends, respecting the exact seat of the disease which terminated too fatally. The appearance of the late Dr. Turner, for the last two months of his existence, gave a painful certainty to the most casual observer, that the stay of this eminent chemist amongst us was to be but of short duration; and to those who had not the opportunity of observing the symptoms he laboured under, but who merely saw him occasionally in the exercise of his profession, his extreme emaciation, pale countenance and great debility, left no other impression but that he was the subject of phthisis pulmonalis; and hence was the origin of this report.

Drs. Thomson and Elliotson were constant in their attendance upon their late eminent colleague, and both were satisfied that no disease existed in the chest; but though they agreed that the abdomen was the seat of the fatal affection, yet each held a different opinion as to the organ affected. Dr. Thomson supposing it to be the pancreas, whilst Dr. Elliotson supposed it to be the spleen.

Mr. ——— conducted the examination in the presence * * *

The contents of the thorax were perfectly healthy. There were even no adhesions detected between the pluræ. The *pancreas spleen* and liver were also free from disease, but the small intestines were ulcerated to a considerable extent. This was the only morbid appearance which was detected.

"Vita brevis, ars longa, occasio celeris, experimentum periculosum, et *judicium difficile.*"

Such was the first aphorism of Hippocrates.

THE BRITISH MEDICAL ASSOCIATION.

A CONTEMPORARY remarkable for extreme delicacy, "high moral feeling," and unparalleled tortuosity, in imitation of Mr. SERJEANT EITHERSIDE, has in turn lauded and abused the BRITISH MEDICAL ASSOCIATION, and refused to insert the just remonstrance of that influential, though oppressed body, to his false and gross mirepresentations.

There can be no doubt but he has added fresh laurels to his well-earned renown.

ST. GEORGE'S HOSPITAL.

OPERATIONS AT ST. GEORGE'S HOSPITAL.—DISTRESSING OCCURRENCES.

Last week three capital operations were performed at St. George's Hospital, in the presence of an immense number

of spectators, besides the medical staff of the establishment.

The first was the case of a boy about two years of age, on whom the operation of lithotomy was performed, and the result of which was most distressing, exciting the greatest sympathy for the operator and medical staff of the institution.

The incision was made into the bladder in the most skilful manner by the operator, Mr. Hawkins, and after having searched in vain for thestone, and after having afterwards solicited the assistance of the other surgeons who were present, and after searching in the most diligent manner for about ten minutes, the bladder was injected with warm water, and again searched, but, we lament to state, that no stone could be found.

The second operation was performed by Sir Benjamin Brodie, which was an amputation below the knee. A circular incision was made in the usual manner, the muscles divided, but in sawing through the tibia, we regret to state that the saw became so completely locked, that it required absolutely force before the worthy Baronet could disengage it, and proceed with the operation. This untoward circumstance was followed by splintering of the bone; an accident of comparatively little importance for the future cure or beauty of the stump.

The third capital operation was an amputation similar to the above, and was performed by Mr. Hawkins. No untoward event took place until, as in the former case of Sir Benjamin Brodie, the bones were being sawn through, when, on this part of the operation being finished, the operator ascertained to his surprise that the tibia was two inches longer than the fibula, or as it was remarked by Sir Benjamin, the fibula was two inches shorter than the tibia. The projecting part of the tibia was accordingly sawn off, so that an excellent stump was thus formed.

The performance of so many important operations on one occasion is a system in our hospitals which, though it may be calculated to excite and even create the wonder of students, is fraught with serious evils to patients, as well as to operators. The feelings which were universally manifested by the harassing and painful circumstances which occurred in the operation of lithotomy, made the appearance of a second, and afterwards of a third, patient brought in succession into an operating theatre, to submit to all the horrors of severe operations, may be more easily conceived than described.

NEW OPERATIONS FOR THE REMOVAL OF ABDOMINAL TUMOURS.

By C. R. King, Esq.

[Saxmundham, Suffolk.]

There are two considerations which, I trust, will be deemed of sufficient importance to justify a detail of the following facts to the medical public. First, that it will increase the evidence to which the profession may refer, for founding opinions upon the probable safety of further attempts to remove disease, by opening the great cavities of the body; and, secondly, the probability of its giving rise to further successful attempts to remove a morbid state which has almost invariably been left to exercise its ravages in freedom, the patient falling a sacrifice to it after a series of years of suffering, and of incapacity for useful or pleasurable exertion.

Case 1.—*Enlarged Gland in the Mesentery.*—The first case is one in which the cavity of the abdomen was opened with impunity. Some years since I became an attendant on a near relation, who, for upwards of three years, had suffered from disease in the cavity of the abdomen. At that period its parietes were considerably distended, both by fluid and solid matter. In its progress the case had been seen by many of the leading surgeons of the metropolis, whose opinions on its nature differed. As there was distressing difficulty of breathing, from mechanical pressure upon the diaphragm, at the time the individual was so situated as to come under my care, I thought that relief would be experienced by removal of the fluid; accordingly, about two gallons were extracted. This was followed by very great relief to the breathing, and to the system at large. The operation was repeated several times during the progress of the disorder, and always afforded great comfort and satisfaction. By the extraction of the fluid an opportunity was afforded of examining more satisfac-

torily the solid part of the diseased mass. It was large and irregular, presenting three spherical projections; the largest occupied the upper and left side of the abdomen. These projections had an elastic feel. The disorder had made but a slow inroad upon the life of the patient,—somewhat resembling that occasioned by ovarian disease in the female. There was every inducement to desire prolongation of life, on the part both of the patient and his relatives.

It seemed possible that these tumours might be sacs of fluid, and it was resolved to test them. A medical friend (Dr. Field, late of Ipswich, whose name I cannot mention without expressing a regret that he should not have continuously devoted himself to professional pursuits on some genial spot, from the time he left the schools, for no man, from industry and talent, was better calculated to advance our knowledge of medicine, or to relieve sufferings from disease), and myself determined upon exposing the large projection, and ascertaining its nature, by an adequate incision. We made a division of about three inches through the integument and the linea semilunaris of the left side, a little above a line drawn across the abdomen, from the umbilicus. The fluid escaped, but whilst attempting to examine the nature of the tumour, a rush of omentum took place, completely filled the wound, and escaped through it in considerable quantity. Whilst endeavouring to return it my relative became discomposed, and expressed a wish that the attempt might be abandoned after the return of the omentum. Sutures were used to close the wound. Some little pain was felt at the part, for a few days, but not enough to occasion anxiety, or create any additional irritation in the system at large.

In a few months afterwards the vital principle became exhausted, and death took place. Upon examining the body, the tumour was found to be an enlarged gland, situated in a fold in the mesentery. It was very considerable in size, part of the small intestines traversing its greatest circumference. Its composition was infinitely diversified; it contained a portion of almost every structure of which the human body is composed. At the part where the incision was made, there existed an adhesion between the tumour and the cicatrix. This case had occupied some years in completing its course. It evidently from the commencement possessed power over life. There was every circumstance which rendered the life of the person most important, and, probably, a competent judge might, in the first instance, have assumed the possibility of removing, and a bold surgeon might have extirpated, the morbid body, and preserved a most interesting and valuable life.

Case 2.—*Moveable Abdominal Tumour; unsuccessful Exploration.*—In March, 1834, Sophia Puttock, ætat. 40, complained of suffering very greatly from a variety of unpleasant feelings in her abdomen, back, and lower extremities. She spoke of herself as being rendered perfectly miserable, and feeling her life a burden. On examining the abdomen, I perceived a tumour, situated on the right side, about midway between the superior spine of the ileum, and the edge of the ribs above it; the tumour appeared to be between four and five inches long, and two or three broad, forming in shape more or less of the segment of an oval. It was tender to the touch, and, apparently, attached by an extended medium. It could be moved with facility in all directions, downwards, and laterally, to an extent of four inches. It could be passed upwards, in the direction of the liver, until it seemed to disappear under its concavity; and when it was pressed up in that direction it became lost to the touch, and did not descend without an alteration in the position of the person, but whenever an examination took place, in the first instance tumour was always in its centrical position. I sannot say that I thought that the health of the person was particularly deranged, or much affected by the presence of the tumour, but there was a depression of feeling which rendered life so irksome, as to create a disposition to submit to any treatment which might afford a prospect of relief.

All the usual modes of treatment having been resorted to without benefit, I asked the patient if she was willing to have it removed. She embraced the suggestion with eagerness, and pressed me so much to make the attempt, that I consented. Indeed, the night before the day fixed for the operation, she wrote to me, expressing a hope that I should not waver in my resolution, as her own determination was

not, in the least, shaken. The case was examined by my friend, Mr. Jeaffreson, surgeon, of Framlingham, and he coincided in the opinion that an attempt to remove the tumour was justifiable, under existing circumstances.

On the seventh of March, 1834, the operation took place, in the presence of Mr. Jeaffreson, Mr. Lanchester, of Laxfield, and five other members of the profession. Previous to its performance they were asked, *seriatim*, to examine the patient, and give their opinions of the propriety of the attempt. They all agreed that the attempt was justifiable. The patient was laid in a horizontal position, and a vertical incision was made through the parietes of the abdomen and linea semilunaris, to the extent of about seven or eight inches. On the cavity being thus exposed, the fingers were passed down to search for the tumour; it was not met with. To give greater facility for examination, the wound was enlarged in the direction of the lumbar vertebræ, for about four inches. The search was repeated most carefully, not only in the perpendicular direction, but upwards, towards the liver and the small extremity of the stomach. Several of the gentlemen present repeated the attempt to find the tumour, but unsuccessfully. The kidney of the same side was handled, and appeared to be more moveable than natural, as it could be raised from its position nearly two inches. After the cavity of the abdomen had been exposed for about twenty minutes, it was determined to reclose it, which was done without difficulty, by the common interrupted sutures. The patient bore the operation with the greatest fortitude, complaining but little of pain. The only circumstance which arose worthy of remark, was a sense of sickness, almost as soon as the cavity was exposed,and frequent retching. The pulse became rather quick, but was regular.

During the time of the exposure, it was impossible to avoid thinking with what facility any of the large arterial trunks might be secured, and asking the question if it would not be better thus to expose to the eye the aorta, or the external iliac, when they demanded to be tied, than to disturb the parts in their immediate vicinity to the extent they usually are, adding greatly to the chance of an irritative inflammatory process taking place in the very neighbourhood of the ligature. There is often as much benefit derived from a detail of cases where untoward circumstances arise, or the result is unsuccessful, as from those which, in all respects, flatter the judgment and skill of the practitioner.

The result of this case shows how industriously and intently the mind requires to be directed to every possible contingency when an operation is undertaken. I believe that the gentlemen who were present will say, that no hurry or discomposure was evinced during the time that passed from the commencement of the affair; but notwithstanding this apparent perfect self-possession, it did not occur to me, when the tumour could not be found, to raise the body out of the horizontal position, for this alteration of position always brought the tumour down from its hiding-place. I consider this as a fault, and I mention it that it may excite the most active attention in the minds of others when placed in similar circumstances. Mrs. P. is now alive; the tumour is still to be felt, increased about one-fourth, or a third, in size, of the same shape, and equally moveable; and it is singular that the patient declares that she has been much better since the performance of the operation. She is now able to execute her household duties, which she could not before. She also declares, that should she be worse she would willingly submit to another operation.

I would here ask, if the absence of a portion of the former morbid feeling may not be owing to the removal of the pressure by the division of the linea semilunaris. It is evident that over the place of incision nothing but integument offers resistance, and the pressure upon the tumour is, therefore, lessened.

Case 3.—*Ovarian Dropsy. Removal of the Cyst.*—The following occurred in the practice of my friend, Mr. Jeaffreson, of Framlingham, in this county. He has given its history to the new East of England Society, (of which I have not the honour of being a member,) to be published in their *Transactions;* but he has allowed me to detail its leading features, and without doing so I could not, with satisfaction, detail my own, and fourth, case, now forwarded, as it certainly may be said to have been a

scion grafted on his parent stock.* Mr. Jeaffreson, who is a gentleman of most extensive professional knowledge, and well acquainted with all the attempts which have been made to relieve ovarian disease, met, in a dissection, with a verification of the opinion, that the disease was sometimes simply saccular and inadherent, and that this sac might after the escape of its fluid, be readily extracted through a small opening.

In November, 1833, Mr. J. was called to attend a Mrs. B. in her second labour. During the labour the progress of the birth of the child was interfered with, by a tumour descending between the head of the fœtus and the brim of the pelvis. The tumour was ultimately pressed back, and the child born. In March, 1836, Mr. Jeaffreson again attended this woman in labour, and after the birth of the child the abdomen remained considerably distended. The tumour, which had before interfered with the birth of her second child, had greatly increased. This tumour appeared to be ovarian, of the simplest kind; the integuments were thin, and the fluctuation was most vivid at all points of examination. The patient was delicate, and the tumour interfered, in some little degree, with the performance of her domestic duties. Mr. J. after having sedulously but ineffectually tried all the usual plans, mentioned to her the possibility of her being cured by submitting to an operation for removing the sac and the disease altogether. To this she consented. Mr. Jeaffreson invited my presence, and on the 8th of March the operation was performed. Mr. J. made an opening below the umbilicus, about one inch and a half in length, exposing the sac of the ovary very readily, which, as room was afforded, protruded. A trocar was passed into it, and twelve pints of discoloured serum escaped. The sac was prevented from receding, by the application of forceps, and after the evacuation of the fluid gentle extension was made, and the sac generally extracted. Some impediment arose before it was supposed to be fully extracted, and upon passing a finner into the abdomen it was found to arise from a separate small tumour attached to the larger; the wound was a little enlarged, and this second tumour readily foltowed. Upon ascertaining that nothing remained to be extracted, a silk ligature was passed around the membranous mass which connected it with the uterus, and which, drawn into a cord by extension, was of about the size of the little finger. The sac was then separated, and the ligature cut short and allowed a free ingress within the abdomen; the wound was closed with sutures, and simply dressed. The patient had no pressing disturbance during the operation. One drachm of tincture of foxglove, and two grains of opium, were immediately given to her; no bandage was placed around the abdomen, but thick clothes, wetted with the coldest water, were applied over the whole abdomen, and removed every four or five minutes. No unpleasant symptoms arose until the second day; vomiting and hiccough then came on, with low pulse, griping pain of the abdomen, and pain in the course of the anterior crural nerves. These symptoms subsided upon treatment. No further threatening occurred, lactation never ceased, and the female is at this moment perfectly well, and able to perform with pleasure, all the duties of her station. I shall terminate this, already, I fear, too long communication, with a fourth case.

I shall terminate this communication by observing that I think that Mr. Jeaffreson deserves the thanks of the profession and the community, for the bold step he took in advising his patient to submit to the operation. when life is immmediately threatened, or when a person is suffering severely from a morbid state, incapacitating him from the performance of the duties of his station, and at the same time rendering life irksome, the course to be pursued is unequivocal, and naturally urges itself upon us. I have no hesitation in confessing that when Mr. Jeaffreson took me to the case I did not feel fully satisfied that the operation was defensible. The person had a small family, was the wife of a working man, and, although inconvenienced, would no doubt have lived many years, and would have been more or less able to protect and assist her family. By the operation she might have been destroyed; it, however, succeeded, and mine was built upon it, and I think that we may say that it opens a new era to those who may be labouring under ovarian disease, and no doubt hundreds of individuals have been consigned to a

* These cases are mentioned in a report in *The Lancet*, Jan. 7th, page 539.—Ed. L.

lingering death who might have been restored to the fulness of vigour and health. These cases will, I think, materially add to our confidence in the powers of the human frame to dispose of ligatures when left in cavities.

Miss Cavell's case shows that very considerable abdominal distension may take place, and the disorder may have existed for a considerable time, without being accompanied by a disposition in the sac to adhere to neighbouring parts, and should, in attempting a repetition of these operations, so much tumour be found that it will not follow the detached portion of the sac, or should adhesion prevent it, there need be little dread in opening the cavity sufficiently to enable the surgeon to see what the state of the parts really is, so that he may detach the adhesion, or content himself with separating the loose part of the sac from the substance with which it is connected, and which might not admit of removal. The attention of the profession will, probably, in future, be more intently devoted to ascertain, in its earliest stage, the character of abdominal tumours, whether the nature, circumstances, and situation, will admit of a removal, and instead of postponing an evacuation of fluid in suspected ovarian disease to as late as possible, they will attempt to remove it in its early stage.—*Lancet.*

MARYLEBONE LITERARY AND SCIENTIFIC INSTITUTION.

On Monday evening, Feb. 20, Dr. Grant delivered a lecture in conclusion of a course which he had commenced, on the radiated classes of animals. After remarking on the quantity of calcareous matter being the cause of the small radiated animals residing at the bottom of the sea, he traced a connection between living and extinct animals in those zoophytes whose remains had been found containing a portion of their flesh in a semi-petrified state. The Accyloderma or Echinoderma are attached to the rocks by peduncles, and possess an alimentary canal covered with orifices, through which their food is taken in: their origin or first state was traced to a mere fleshy covering, the calcareous matter being subsequently formed, by a deposition of successive layers; the latter serving as an external defence for the skeleton. The learned lecturer, in alluding to the great progress which Geology had made in late years, observed, that a tribe of radiated animals, the Encrenites, which had long been supposed to be entirely extinct, had been recently found by Mr. Thomson, of Dublin, growing upon the surfaces of plants: and, after remarking upon the Uriale, he described the Asterias. The mouth of the latter is placed in the centre of its body, and extends vertically: it is a predacious animal, having its stomach situated in the central cavity, and branching out into several small follicles, through which the excreted fluids are poured out. The hairs or tubular passages which border the elongations of the axis, serve as feet, and possess a high degree of muscular sensibility. They have five distinct senses; the ocular points being situated at the end of each ray. In the Phyclemos the alimentary canal runs along the side of the mesenteric gland, to which it becomes afterwards attached; and the Echinops have merely an abdominal cavity placed inside a shell, and covered by a secretive membrane. The learned Professor concluded his lecture amidst loud cheers of approbation.

HORTICULTURAL SOCIETY.

Feb. 21—Dr. Henderson, V. S., in the chair.

The Secretary read a paper from Mr. Williams on a new and successful mode of cultivating the melon; by an improvement in the common frames, and the application of flowers of sulphur, to preserve the plant from the attacks of insects.

A letter from T. A. Knight, Esq., the President, was next read, on a method of cultivating figs by the better application of artificial heat.

Dr. Lindley directed attention to some fine flowering specimens of Azalea indica et alba, from the Society's Gardens, grown without care or culture; a new species of Hellebore (odorus); Oricidium amplicatum et biflorum; and five Camellias, from Mr. Strangeways. A silver Knightian medal was announced as being awarded to the Rev. J. Rashleigh, for a fine specimen of a new green house plant from Chili, the Træporeum azureum.

CURIOSITIES OF MEDICAL EXPERIENCE.

No experience is so fertile in themes which powerfully arrest the curiosity of man as that which is consequent on the practice of a physician. Human nature abounds in phenomena; almost every individual is, either morally or physically, a riddle to himself, and the medical man is a kind of father-confessor to all. What strange things, what profound mysteries must, therefore, constantly be presented to his observation! The author of the present volume is Dr. Millingen, a gentleman whose professional experience has been considerable, both here and on the Continent. Among the subjects of which he treats, the following are exceeding curious:---Unlawful Cures, Ecstatic Exaltation, Inhumation of dead in Cities, Lunar Influence, Medical Powers of Music, Love Philters, Ventriloquism, Dæmonomania, Causes of Insanity, the Night-mare, Incubation of Diseases, Dreams, the Homœepathic Doctrines, Animal Magnetism, Affections of the sight, &c.

LITERARY NOTICE.

Preparing for Publication.

Mr. Liston's Practical and Operative Surgery; one vol. 8vo., illustrated by very numerous and carefully executed etchings and wood-cuts.

Comprehending the description and treatment of VARIOUS INJURIES; wounds, fractures, dislocations, &c. Of EXTERNAL DISEASES. Ulcers, tumours, strictures, &c,

The mode of operating, dressing, and bandaging under all circumstances, &c. By Robert Liston, Esq., Surgeon to the North London Hospital, Professor of Clinical Surgery in the University College of London, &c.

METROPOLITAN UNIVERSITY.

The first meeting of the Senate of the New University will be held at Somerset House, on Saturday, this day.

TO CORRESPONDENTS.

UNIVERSITY COLLEGE STUDENT.—The reason of the pupils not far exceeding a dozen at the lectures on jurisprudence, arises perhaps, from the clearness and perspicuity in which they are given by the reporter of the Lancet.

MODESTAS.—As journalists we possess no means of correcting the obscenities complained of. The pupil has no other remedy than absenting himself from such prelections.

ÆSOP.—We know all the anecdotes of the Duke of Wellington and Sir Robert Peel, which are interspersed in the lectures at King's College, are fabrications, and not worthy of insertion in this journal. The *fables* are narrated merely for the purpose of attracting notice amongst a certain political clique, and may answer some future electioneering purpose.

ARGUS had much better not institute any enquiry about the midwifery lectures at King's College, until a certificate of attendance be proved to be a fraud. The morning of the Sabbath being employed for examinations in midwifery, in place of being devoted to pious purposes, merits the severe animadversions of the Archbishop of Canterbury, and the numerous churchmen connected with the College

ROGET'S GHOST must favour us with his name confidentially. We are quite aware of the fact, that the *pseudo fellow* attended Doctor Grant's lectures on Comparative Anatomy, and derived great assistance from him in the compilation of his Bridgewater Gleanings, which he has forgotten to acknowledge.

A KING'S COLLEGE STUDENT. If our Correspondent will do us the favour to call on us, and authenticate his letter, we shall publish it. It reminds us of the adage, "Vale doctor, sine discipulis—valete discipuli, sine doctore."

A BARTHOLOMEW'S HOSPITAL STUDENT. He will never set "the Thames on fire."

All communications and books for review to be forwarded, carriage paid, to Dr. RYAN, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

ROYAL

THE

London Medical and Surgical Journal.

No. XXVIII. SATURDAY, MARCH 11. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XIII.

Generation.

Tests of respiration—Statistic test—Ploucquet and Gordon Smith—Hydrostatic test—Galen and William Hunter—Emphysema of the lungs—Artificial respiration — Putrefaction — Breathing before birth — Speaking before birth—Objections and difficulties—Means of obviating them—Sensation—Linneus's Aphorism—Proofs of sensation in plants—Definition of sensation—Dependence of animal on organic life—Seat of sensation—True point of division between the brain and spinal marrow—Experiments of Fleurens's examincd—Decussation of fibres in the spinal marrow—Difference between the fibres of the anterior and of the posterior columns—Expansion of the columns in the cerebrum and cerebellum—The nerves of the senses are spinal nerves—Office of the fifth pair of nerves—Seat of thought and emotion—Difference between intellectual and sensual—Plurality of the nervous system an ancient doctrine—Discoveries of Gall, Charles Bell, and Bellingeri—Cerebral and spinal nerves—Non-existence of the former—Incorrect nomenclature of the nerves—Motific, sensific, and regular nerves—The medulla oblongata—The corpora Pyramidalia—The par vagum —The cauda equina—The corpus dentatum—The fifth pair of nerves in the mole—Structure of the sensific nerves—Insensibility of the brain, heart, and lungs—Sensation without nerves—Females probably less sensible and more irritable than males—Sense of smelling—Seat of the irritation—Nerves which convey it—Nostrils of the negro—Sense of seeing Cornea of the lepia—Eyes of insects, birds, and fishes—Anterior and posterior chambers of the eye—Muscularity of the iris — Pigmentum nigrum, retina, and hyaloid membrane.

Ploucquet said that the relation between the weight of the lungs, and that of the body, is constant, and that after respiration, the weight of the former is doubled. This, however, is not found to be the case. Another experimenter found that the increase of weight from respiration, was only one-*fifth*. Chaussier said it was one-*sixth*. But even if the increase of weight were accurately ascertained, it would avail us nothing, unless we could tell what proportion the lungs bore to the body, *before* respiration. That proportion differs so widely in different instances, as to be fatal to the test. It is given up by almost all writers on Legal Medecine. Gordon Smith, however, still relies on it. As we see the lungs only in one condition, we have no criterion by which to judge whether they have undergone any alteration.

The hydrostatic test is more important. It is, also more ancient; for it was known to Galen. William Hunter opposed it; and therefore a high legal authority called it a "scientific humbug." All that is necessary for its success is, that the difference of density between lungs which have respired, and those which have not, should be either uniform, or so great as to be easily

observed. If the lungs have not breathed, they will sink in water; as do these with which I now try the experiment; but here are lungs which have breathed; and they swim, although the heart is attached to them. There is no radical objection to this test; but several circumstances are to be taken into consideration in applying it. The lungs of a still-born child may swim from,—1. Emphysema. 2. Artificial respiration. 3. Putrefaction. 4. Breathing in the uterus, or the vagina. If there be emphysema, it is interlobular, and the result of secretion. The lungs, therefore, should be well squeezed. If putrefaction be present, they begin to swim on the eighth day; but sink again on the twenty-fifth. Observe the state of the other organs; for if the lungs be putrid, the other parts of the body will be very far gone indeed. You should notice the *situation* of the lungs (near the spine, when they are putrid); their *odour* and *colour* (red, when putrid); and whether there are bubbles under the pleura. The middle pieces of the lungs will often sink, while the other parts swim. Cut the lungs into fragments, and squeeze them between cloths.

Some writers have denied the possibility of effecting artificial respiration in a child which has not breathed; owing to the mucus which clogs up the bronchia. Artifical respiration may have been performed on a child born dead, in order to criminate the mother. Some persons maintain that the air can be squeezed out of the lungs of a child which has respired; but by most it is denied. Observe whether the parenchyma of the lungs is altered in colour; but more especially notice the state of the *foramen ovale*, and the *ductus arteriosus*.

Livy mentions the case of a child *in utero*, calling out, "To triumph!" Many *real* instances, however, of crying in the womb, are on record. There is one case in which the infant cried nearly every day for five weeks before delivery. Marc is the only person who denies the possibility of breathing in the vagina. Some affirm that if the signs of respiration observed in the lungs, be the consequence of the child having breathed in the uterus or vagina, the mother could not have been delivered without assistance. But this is not the fact; for a woman, in such circumstances, would bear anything rather than call for help; or she may have assisted herself. Even after the head is born, the body is not always born immediately. Osiander had a case, in which the child died in the interval.

We have now gone through the first of the two classes, into which we divided the functions of the body; as will be seen by the following plan. I. *Functions which require irritability alone.* 1. Respiration. 2. Flow of Arterial Blood. 3. Secretion and Nutrition. 4. Absorption. 5. Flow of Venous Blood, Lymph, &c. 6. Digestion. 7. Generation. II. *Functions which require other properties superadded to Irritability.* 1. Sensation. 2. Thought. 3. Voluntary Motion. We now proceed to the second class.

Sensation.

Linneus seems to intimate, in his celebrated aphorism, that irritation must precede sensation;* and that plants have only the former. But many phenomena seem to show, that plants may possibly possess sensation; such as their creeping in a dark room to an opening; the radicle always *descending*, and the plumula *ascending*; the periodical rising of water plants to the surface; the peculiar form which a sprig of mint assumes, in a glass half full of carbonic acid; &c. Here it cannot be from a stimulus acting on irritability; for no stimulus is present. It must be from the sensation of a want; or from a direct irritation from the absence of accustomed stimuli, in the same way as cold produces an irritation. These motions are instinctive, and not from thought; for sensation may exist without thought. Sensation may be defined to be "the perception of an irritation;" according to Glisson's aphorism;—"irritatio, perceptio; sensatio, perceptio perceptionis." Stimuli act on irritability; and this becomes a stimulus to sensation; being conveyed to the brain, where it excites sensation.

Organic life is *la veritable vie*. *Animal* life, as it is called, is not a *new* life, but a set of functions which render living beings more perfect; but without which we should still continue to live. *Organic* life may survive the loss of *animal* life; but the latter ceases in-

* Minerali crescunt; vegetabilia crescunt et vivunt; animalia crescunt, vivunt, et sentiunt.

stantly, if the former be suspended. The action of the brain may be suspended, as in sleep and apoplexy, and yet life will still go on; but if we stop the heart, life ceases.

The seat of sensation is the posterior columns of the spinal marrow; though it is only lately that the *brain* has been thought not to be the seat. Now the division between the brain and spinal marrow is not at the *foramen magnum;* but so far within the skull, as to make the spinal marrow include all the origins of the sensific nerves, the *tuber annulare*, &c. The seat of sensibility has been referred to the *cerebellum* by Foville, Pinel, Grandchamps, and Duges; to the *cerebrum* by Zime, Haller, Rolando, and Fleurens; and to the *posterior columns* by Reddi, Swammerdam, Larrey, Le Gallois, Gall, Bell, Magendie, and Mayo. The experiments of Fleurens prove the reverse of what he contends; for injuring the superficial parts of the brain does not injure the senses; and the brain was found to recover from the injury. All the senses were injured together by the same wound, indicating, that the nerves which supply these senses have a common origin.

The decussation of the fibres in the spinal marrow, is probably not direct, but oblique; and the decussation is anterior and posterior, as well as lateral. We can see this in the *anterior* columns, but not in the *posterior*; the fibres of the latter not having a neurilema. The posterior columns, however, must decussate; for sensation and motion are impaired together, after injury to the opposite side of the brain. The *right posterior* column seems to be expanded into the *left* hemisphere of the *cerebrum;* the *left posterior* column, into the *right* hemisphere of the *cerebrum;* the *right anterior* column, into the *left* column of the *cerebellum;* and the *left anterior* column, into the *right* lobe of the *cerebellum*.

All admit that the fifth pair is a spinal nerve; but taste and touch are paralyzed on the same side as sight and hearing; which indicates that if the nerves which supply the former senses, rise below the decussation of the spinal columns, so must the nerves which supply the latter senses. In other animals, the fifth pair performs the office of all the sensific nerves. As man has so large a brain, he ought to have the senses more acute than other animals; which is not the case. He excels, however, in thoughts and emotions; and these probably have their seat in the brain. We speak continually of an *intellectual* man, as opposed to a *sensual* one, can both these qualities take their origin from the same place?

The plurality of the nervous system, is a doctrine as old as the hills; but it was seldom alluded to at the time I studied; for then *nerve* was *nerve;* and if any organ (such as the tongue) was supplied with nerves from different sources, it was not thought that the organ thus acquired different properties; but that it was well supplied with nervous energy. Gall first gave a succinct view of the doctrine; but he took no notice of the respiratory system. Charles Bell has done more than any one else for this department of study; although no doubt his views are too exclusive, with respect to some nerves; as the *portio dura* and *par vagum*. Bellingeri has found that in those cases in which the respiratory nerves impart motion and sensation as well as their peculiar influence, they get filaments from the *anterior* and *posterior* columns of the spinal marrow.

The division of the nerves into *cerebral*, and *spinal*, is incorrect. There are no *cerebral* nerves in the body. The nerves should not be named according to the holes through which they make their exit from the skull, (*first* pair, *second* pair, *third* pair, and so on), but according to the function they perform. To describe them in the former way, only ministers to confusion. The filaments from the *anterior* columns of the spinal marrow are *motific:* those from the *posterior* columns are *sensific;* and if combined together they form what are called *regular* nerves. Haller and Winslow saw the inconvenience of numbering the nerves according to the *foramina* they perforated; and they relinquished the plan. We used to number the muscles in the same way.

The *medulla oblongata* belongs to the spinal marrow. It is broader, as compared with the brain, in the lower animals than in man. The *corpora pyramidalia* are seen first in birds; and they do not exist even in all of them; but they are found in all the mammalia. The *par vagum* is very large in fishes; which allows for the laborious nature of their respiration. In the human fœtus

during the earlier months, and in the lower vertebral animals, there is no *cauda equina*. As organization advances, the brain seems to gain, what the lower part of the spinal cord loses. The *corpus dentatum* of the olivary bodies, is formed of grey matter.

Bellingeri denies that there are any fibres in the posterior columns of the spinal marrow; which are plexiform in in their structure. Gall cannot trace the optic nerves beyond the testes, but he infers that they arise from the spinal column, or sight would be paralyzed on the side opposite to that on which the other senses are palsied, by any injury which involves the whole. This is quite evident in the mole; in which the fifth pair of nerves supplies the place of the optic; and as the fifth pair is obviously a spinal nerve, we have a right to conclude that the nerve of which it is vicarious, is spinal also.

The sensific nerves are flattened; and consist, not of fibres, but *lamellæ*. I shall not go further into the anatomy of the parts; but must refer you to Gall. The ancients knew that the brain was insensible also. Harvey handled the heart and lungs of a man named Montgomery, without giving him pain. It is only the *shell* of the body that is sensible. The ganglionic and respiratory systems, however, do derive filaments from the sensific system; but these filaments are so small, that in their ordinary state they do not convey stimuli; but if they become diseased, interstitial absorption makes them sensible: I think the lower orders of animals may have sensation, although they have no nervous system; just as they have irritability without a ganglionic system. Females have probably less *sensibility* than males, though they have more *irritability;* the spinal column constituting a two-*fiftieth* part of the nervous mass in women, while in man it is two-*forty-seventh*. The sensific nerves are *conduits;* and not the *seat* of sensation.

We shall now consider in detail what are usually denominated "the five senses;" after which we shall investigate what has been called a "sixth sense;" and various miscellaneous sensations.

I. *Sense of Smelling.*—The seat of the irritation, the perception of which constitutes smell, is the Schneiderian membrane; and the nerves which convey it are probably the olfactory. Magendie thinks that the fifth pair of nerves, in some animals, performs that office, and that it probably assists in man. But so, probably, does the skin assist in respiration; though the lungs are not on that account superfluous. A negro has very large nostrils; sensation, in him, being provided for, at the expense of the intellect. What we gain in the *intellectual*, we lose in the *sensual*.

II. *Sense of Seeing.*—The *sepia* has no cornea. Insects have no crystalline lens, or humours in the eye; but they have many fascets, or distinct eyes, each furnished with a process of the optic nerve. The cornea is the only transparent fibrous membrane in the body. In the eye of a fish the cornea is very flat, and the crystalline lens very round; while in the eye of the birds it is just the contrary. The cornea, in the eye of the insect, rests immediately on a pyramid of the optic nerve. The anterior chamber, in the human eye, is five times as capacious as the posterior; but the fluid in both does not exceed five grains. In some birds, and many of the mammalia (the *cat*, for instance,) the iris seems to be under the dominion of the will. The iris of a fish is very sluggish; and the anterior part of the lens comes close to the cornea. Carus has lately adduced proofs of the muscularity of the iris, which require consideration.

In man the *pigmentum nigrum* is on the *convex* surface of the retina; while in the sepia it is on the *concave* surface. The entrance of the optic nerve into the eye-ball, is one-tenth of an inch nearer the nose than the axis of the eye. The spot of Sœmmering, which exists only in man and the ape, is in the axis of the eye. We cannot tell the use of the *marsupium*. It seems calculated to *impede* vision. The hyaloid membrane consists of two layers. The liquor of Morgagni is contained in the capsule of the crystalline lens. The anterior surface of the crystalline lens is more convex than the posterior; the radius of the former being to that of the latter, as thirty to twenty-two. The mean density of the lens, a thousand one hundred and sixteen compared with water taken at a thousand.

TREATMENT OF FRACTURES.

FRACTURES IN GENERAL.

A fracture is a solution of continuity of a bone, caused by a force disproportionate to the natural extensibility of the injured part.

The broken extremities of the bone grate on each other when moved, and the noise is termed crepitus.

The crepitus is sometimes obscure, and can only be heard through the stethoscope.

Treatment.—The indication of treatment is to reduce the broken extremities to their natural situation, and to keep them in that state by adhesive plaisters, bandages, and splints.

Bones of the Head.—Fractures of the skull are generally followed by concussion or compression of the brain, and when a piece of bone is depressed in the upper part of the cranium it should be elevated by the operation of trephining; but this is rarely performed at present.

Bones of the nose.—When these bonesare fractured and depressed, a female catheter, or any blunt instrument, is to be passed into the nostril, used as a lever, the bones raised into their natural position and adjusted with the fingers of the left hand. In some cases the nostrils must be plugged with oiled lint to keep the fractured bones in their proper situation.

Lower Jaw.—Push the displaced part upwards and a little forward, and bring it on a level with the portion which is in its natural situation. The arch of the teeth ought to be rendered regular, or as nearly so as possible. The lower jaw should be kept in apposition with the upper. A piece of wetted pasteboard notched on the edges is applied over the jaw on both sides, and secured with a four-headed roller, the centre of which is placed on the chin, the two posterior tails pinned to the front part of the night-cap, and the two anterior ones fastened to the cap more backwards.

The patient should take broths, soups, jellies, &c., a spoon being introduced between the teeth; and avoid all food which requires mastication.

Bones of the Spine. The bodies of the vertebræ are not fractured by blows but by heavy weights, as when a bank of earth or a heavy weight falls upon them. Crepitus cannot be heard as in other fractures, but there will be derangement of the spinous processes. A blow may crush in the arch of the bone.

When the fracture is above the third cervical vertebra, death is generally the immediate result.

When the fracture is below this part, death takes place at various periods after the injury, and is generally consequent upon it.

The cause of this difference is the origin of the phrenic nerve from the third and fourth cervical pair, for if the fracture is below this part, the phrenic nerve performs its functions, and the diaphragm supports respiration; but if the fracture is above the origin of this nerve, immediate death is the consequence. The small filament of the second cervical nerve which contributes to formation of the phrenic, is in itself insufficient to support respiration, when the third cervical vertebra is fractured.

Treatment.—Any attempt to adjust fractures of the spine is both useless and dangerous, for every change of posture or turn of the body causes the broken bones to be forced against the spinal marrow. Cupping or leeching near the affected part, cold lotions, purgatives, and all antiphlogistic measures ought to be employed to prevent myelitis or inflammation of the spinal marrow. When there is gaseous or flatulent distension of the abdomen, carminatives, antispasmodics, oil of turpentine, and stimulating liniments are necessary. The bowels and bladder ought to be attended to, and purgatives, clysters, and the catheter used when necessary.

Sternum. Apply a soap plaister, a roller round the chest, let the patient remain quiet and have antiphlogistic remedies. Watch the state of the respiration, and prevent inflammation within the chest by the usual remedies.

Ribs.—Apply a soap plaister, then compresses, and lastly a broad linen roller round the chest, so as to impede the motion of the ribs, and compel the patient to perform respiration by the diaphragm. The ribs ought to be kept from moving, and as quiet as possible.

When a fractured rib is forced inwards, the lung may be punctured or the intercostal artery wounded, and a discharge of blood from the mouth, mixed with froth, is a certain sign that the lung is wounded. In such cases, the practitioner must guard against pleuri-

tis, or pneumonia; and employ venesection, local bleeding by leeches or cupping, and the usual remedies for inflammation of the chest.

When the patient complains of oppressed breathing, and a tumour appears on the broken rib, which crackles under the finger, there is emphysema.

Clavicle.—The arms and shoulders of the patient are to be firmly drawn backwards by an assistant, when the fractured extremities of the bones immediately come in apposition. They are now to be covered with a piece of soap plaister, and a bandage applied to keep them in their natural situation. The bandage is a single-headed roller which is passed under the axilla of one side, and over the opposite shoulder, so as to describe the figure of 8 on the back. It should be drawn with considerable tightness, and the arm of the affected side afterwards supported in a sling.

Scapula. — *Acrominion Process.* — The roundness of the injured side is absent, and as part of the deltoid muscle is broken off, the head of the os humeri sinks towards the axilla, as far as the capsular ligament will permit. If we trace the acromion from the spine of the scapula to the clavicle, a depression is felt at their junction, caused by the descent of the fractured portion. The distance from the sternal end of the clavicle to the extremity of the shoulder, is diminished on the injured side. When the arm is raised from the elbow, so as to put the deltoid muscle in action, the natural form of the shoulder is at once restored, but the deformity immediately returns when the arm is allowed to fall by the side. On passing the arm upwards, and rotating it at the same time, a crepitus will be felt over the acromion which distinguishes fracture from dislocation.

There is little deformity in longitudinal fractures of the scapula, as the muscles attached to the surface of the bone, prevent the separation of the fractured portions. The deformity is greater in transverse fractures, as the serratus anticus major draws the lower portion forward to which it is principally attached.

The rhomboides also concurs in producing the derangement which is always perceptible by drawing the fingers along the base or internal side, where the inequality exists.

Acromion and Inferior Angle.—The acromion is drawn downwards by the weight of the arm, and the contraction of the deltoid muscle, while the remaining part of the bone is drawn upwards and backwards by the trapezius and levator scapulæ muscles. The serratus anticus major draws the *inferior angle* forward, while the rest of the scapula remains in its natural situation. When the angular portion is considerable, the teres major and some of the fibres of the latissimus dorsi assist in directing it forwards and upwards.

When the *coracoid* process is fractured, the pectoralis minor, the coracobrachialis, and the short position of the biceps, concur in drawing it forwards and downwards.

Treatment.—In fracture of the acromion the arm is to be raised, the deltoid muscle relaxed, and the broken pieces of bone replaced. The arm is gradually allowed to hang by the side, the fore-arm is supported in a handkerchief, so that the head of the humerus pushes up the broken acromion, so as to preserve it in its place. The middle of the double-headed roller is put under the arm pit of the opposite side, then the ends are brought up and crossed on the top of the wounded shoulder, they are then crossed under the armpit of the same side; they are next carried across the back and breast, and the heads of the roller are again crossed under the armpit of the opposite, and are carried on the injured shoulder again; and these applications are repeated until the shoulder and fractures are covered with a firm lacing of the bandage.

Treatment of longitudinal and transverse fractures of the scapula.—Fix the arm to the side of the body with a bandage which descends from the shoulder to the elbow.

Inferior angle.—Push the scapula downwards and forwards towards the inferior fragment, which the serratus major anticus has drawn in that direction. The next point is to push the arm inwards, downwards and forwards, the forearm being half bent, and keep it in this position with a very long circular bandage.

Cervix scapulæ.—Rotate the arm with one hand while the other is placed on the neck of the scapula, when, in general, a crepitus will be perceptible. In this case the shoulder must be bandaged as in fracture of the acromion process.

Fractures of the Humerus—*Neck of the os humeri.*—Inability to raise the arm, shortening of the limb, underhand motion unaffected, and crepitus on raising and rotating the arm, indicate this fracture.

Treatment.—Place a cushion in the armpit, press the elbow towards the breast, and retain it in this position with a bandage. Next pass a circular bandage round the arm and trunk, and apply splints anteriorly, posteriorly, and laterally to the arm; and compresses wetted with a cold lotion to the shoulder.

Fracture of the middle portion of the humerus.—Grasp the head of the bone with one hand and the elbow with the other, rotate the arm, when no motion will be communicated from the lower to the upper portion of the bone, but a crepitus will be heard.

Treatment.—Apply a pad in the armpit, and a splint to the inside of the arm, and then mould a piece of pasteboard to the shoulder, and let a spica bandage be applied and continued down the arm as a roller. In this case the wrist, and not the elbow, should be supported, so that the weight of the arm may counteract the contraction of the muscles.

Fracture above the Condyles of the Humerus.—Rotate the fore-arm upon the humerus, and a crepitus will be heard. Extend the arm, and all signs of dislocation will disappear, which is not the case in dislocation of the ulna and radius backwards.

Treatment.—Bend the arm, and draw it forwards so as to place the bones in their natural situation, and then apply a roller. Place the arm and fore arm in a splint at right angles. Secure this with straps, keep the arm in a bent position in a sling, and let cold lotions be constantly applied.

Fracture of the Internal Condyle.—Projection of the ulna backwards, the hand is turned towards the side during extension; and on bending and straightening the arm, a crepitus will be audible.

Treatment.—The same as in fracture above the condyles.

Fracture of the External Condyle.—Tumefaction over the external condyle, pain on pressure, and during flexion or bending, and extension of the arm, and crepitus during the rotatory movements of the hand.

Treatment.—Apply a roller round the elbow-joint, and above and below it, and place the arm and fore-arm in a splint at right angles, as in fractures above the condyles.

Fractures of the Fore-arm.—Pain on moving the hand and during pronation, and supination of the arm, crepitus distinct during such movements, tumefaction of the arm anteriorly and posteriorly from the protrusion of the muscles, which the extremities of the fractured bones have dislocated from the interosseous spaces, the other sides of the arm being at the same time depressed, and the direction of the arm changed. When the radius and ulna are broken near the wrist, the swelling often obscures the diagnosis, and the disease may be mistaken for luxation of the hand. But when there is dislocation without fracture, the styloid processes of the radius and cubitus will be in their natural position; and when the bones are broken, these processes will be changed with the motions of the hand.

Treatment.—Bend the fore-arm at a right angle with the arm, and place the hand between pronation and supination. Let one assistant grasp the four fingers of the patient, and extend the fractured bones, while another makes counter-extension by fixing the humerus with both hands.

The operator now reduces the bones to their normal position, and pushes the soft parts into the interosseous spaces, by a steadily increased pressure on the anterior and posterior sides of the arm. A splint should now be applied on the inside and on the outside of the arm, so that both the radius and ulna should be at once effectually compressed. The splint on the inside should extend to the palm of the hand, by which the wrist will be kept steady, and the radius prevented from moving.

Both splints are to be secured with broad tapes or a bandage. Cold lotions are to be used after their application.

Fractures of the Radius.—The hand is prone, there is much pain, the carpal head of the radius turns on the head of the ulna, and the upper part of the radius not moving with the lower, the fractured extremities separate, and the adjacent parts are injured.

Treatment.—Bend the elbow, place the hand between pronation and supi-

nation, so that the palm will be turned towards the patient's breast. Adapt the ends of the broken bones to each other; apply a soap plaister, and over this a loose roller. Then put on a splint on the inside and outside of the arm, and let the inner one extend nearly to the ends of the fingers. Lastly, use a cold lotion assiduously.

Fractures of the Ulna.--Depression on the inside of the fore arm, as the pronator radii quadratus draws the inferior part of the bone towards the radius.

Treatment.—Let an assistant incline the hand to the radial side, while the operator pushes the flesh between the radius and ulna, and then applies a soap plaister, a roller, and splints, as in fractures of the radius.

Fractures of the Olecranon.—On applying the fingers above the elbow joint, there is a depression to the extent of an inch or an inch and half, as the detached portion of the ulna is drawn upwards by the muscles, and it can be easily moved from side to side, and when the arm is bent, becomes further separated.

In this case the arm may be bent with ease, and without any pain; but it cannot be extended without pain and difficulty. When no exertion is made, the arm is semi-flexed, or half bent.

The rotatory motion of the radius upon the ulna is natural, and no crepitus is heard.

There is generally a good deal of swelling from effusion of blood in this accident.

Treatment. — Stretch the fore-arm, but not to the utmost extent. Press on the triceps muscle on the back of the arm, so as to relax it, and bring down the olecranon into its natural situation. The elbow ought to be natural. Then apply dosils of lint above and on the sides of the olecranon, and over these a roller, which is to be passed above and below the elbow joint.

The next object is to keep the olecranon in its natural situation, and this is effected by applying a splint on the front of the arm and fore-arm, to prevent the flexion or bending of the elbow. This splint is secured with another roller, which must be passed from the fingers to the shoulder, and from the latter to the former. The folds of the bandage over the broken bone and elbow ought to be stitched or pinned tightly, and form a figure of 8; for if this precaution is neglected, and the roller loosely applied, it generally will slip, and the olecranon will not be kept in its natural situation.

Bones of the Carpus.—The bones of the hand are rarely fractured, unless from heavy bodies falling on them, or from gun-shot wounds. The tendons on the palm and back of the hand are generally injured, and if allowed to inflame, there will be great constitutional disturbance, pain in the fore-arm and arm, and several abscesses. Gangrene and sloughing may also occur.

Treatment.—Adjustment of the fracture, and prevention of inflammation, or suppuration. Apply cold lotions assiduously, and raise the hand higher than the elbow to facilitate the return of the venous blood, by placing it in a sling suspended from the roof of the bed. In some cases of fracture of the carpus, the constitutional irritation is so great that amputation becomes necessary.

Bones of the Metacarpus. The bones of the hand next the fingers may be fractured by external injury, and by being pressed between two hard bodies, as by machinery, &c. and several of them are, in general, simultaneously broken.

Treatment.—Adjust the fractured parts, then place the hand on a pad or cushion, and apply a roller from the points of the fingers to above the elbow. Lastly, let the hand be kept in a sling, so that it may be more elevated than the elbow.

Fingers.—When the bones of the fingers, or from the knuckles to the nails, are fractured, they are to be properly adjusted, a piece of wetted pasteboard applied and secured with a tape round the affected parts; the hand placed on a flat splint or finger-board, the fore-arm and elbow elevated and well supported in a sling. Cold lotions ought to be constantly applied, as the same bad results are to be expected as in fractures of the carpus and metacarpus. Wounds or inflammations of tendons are always very dangerous.

Fractures of the Sacrum.—Fractures of this bone are caused by falls upon it or blows from some heavy body, as the passage of a carriage wheel over it. It may be broken in different directions, and the sacral nerves may be injured, the effects of which will be, retention or incontinence of the urine

or fæces, and some pains or numbness in one or both inferior extremities.

Treatment.—Adjust the fractured extremities, apply cold lotions and leeches to prevent inflammation, with venesection when there is constitutional disturbance, and finally pass a broad roller round the pelvis. The same treatment will be necessary, when there is severe pain in the sacroiliac joints after parturition.

Fractures of the Os Coccygis.—These occur from falls, blows, or the pressure of the infant during parturition, when this bone projects into the outlet of the pelvis. The patient cannot sit on a chair, there is more or less pain on moving the thighs or on walking, as the ends of the fractured bones are disturbed by the action of the gluteal muscles, some of whose fibres are attached to the coccyx.

Treatment.—Adjust the fracture, and if necessary pass the index finger into the rectum, and place the thumb externally over the fractured part, apply cold lotions and leeches when inflammation is threatened, and advise perfect repose in bed or on a sofa, so that the action of the glutei muscles may not impede the consolidation.

Fractures of the Ossa Innominata.—Hip-bones. Apply a roller round the pelvis, cold lotions, and antiphlogistic treatment if necessary. Absolute repose is indispensable for some weeks or months. A piece of web may be passed under the pelvis, and its ends connected with a pully fixed to the top of the bed, by which the patient may be occasionally raised with little effort or difficulty.

Fractures of the Femur or thigh-bone.—*Neck within the Capsular ligament without laceration.* The diagnosis is often difficult, as the patient may use the limb with little difficulty or pain, and he may bend it on the pelvis or rotate it immediately after the accident. There may or may not be crepitus, or shortening of the affected limb. When the capsule is *partially lacerated*, there will be shortening of the limb, for an inch or an inch and a half, the foot is everted, the movement of the limb is greatly diminished, or the patient may be able to rotate the limb and bring the great toe into its ordinary position, or in a straight line with the axis of the trunk. The patient cannot bend the limb towards the abdomen without pain, and when it is extended by traction to the length of the sound one, it is suddenly retracted or shortened on the removal of the extending force. Pressure with one hand on the head of the bone, and then rotation of it, will elicit crepitus. When the bone is fractured *external* to the capsular ligament, the foot is everted, the hip-joint loses its rotundity, and its painful crepitus is generally audible on examining the upper part of the thigh-bone, or on rotating the limb, or on applying the stethoscope.

Treatment.—The indications of treatment in fractures of the neck of the thigh bone, within or without the capsule, are, 1. To extend the limb to its ordinary length; 2. To keep it in the fixed or bent condition; 3. To prevent inversion of the foot; 4. To elevate the trochanter a little with a pillow; 5. To retain the fractured extremities in perfect apposition; and, 6. To prevent them from moving on each other. Various contrivances are employed for these purposes, and much difference of opinion as to the management of these injuries still prevail among the most experienced surgeons. (Sir Astley Cooper, Baron Dupuytren, Mr. Samuel Cooper, Mr. Earle, &c. &c.)

Fracture within the Capsular Ligament.—Place a pillow under the whole extent of the thigh, and another rolled up, transversely under the knee, so that the limb may be in an easy bent position. Apply cold lotions, and enjoin the patient not to exert the limb for three or four weeks, when he may generally use crutches.

Fracture external to the Capsular Ligament.—Place the patient on the back on a mattress, let the injured limb be bent and supported on the double inclined plane, which consists of three pieces of board; the first to extend from the tuberosity of the ischium to the heel; the second passed from the tuberosity of the ischium to the ham and united by a joint to the third, which is to extend from the ham to the heel. The second is supported on the first by a piece of wood placed under the lower third of the thigh; and the third by another piece placed under the calf or small of the leg, and extending to the first. There are also lateral pieces on each side of the second and third portions, to keep the thigh and leg in the bent position. The upper

end of the splint which is under the femur is firmly secured to the pelvis with a leather strap, and another is passed round the knee, so as to prevent the position of the splint from being changed. When the patient partly or entirely turns on either side, he must do so cautiously, and without disturbing the position of the limb. He must remain in bed for eight or nine weeks before he sits up, and wear the splints for a fortnight or three weeks afterwards. There is a great danger of fracturing the new ossification, and of inducing lameness, unless the treatment be rigidly adopted.

Fractures of the Trochanter Major.—The foot is everted and benumbed, the patient cannot sit without more or less pain, the limb is but little or not at all shortened unless the soft parts are lacerated, and then the trochanter is drawn up on the dorsum of the ilium by the gluteus medius and minimus muscles. The psoas magnus and iliacus internus muscles may also draw up, the superior part of the bone. The patient cannot turn on the side without assistance and severe pain. If the hand is applied on the trochanter, and an assistant rotates the limb, a crepitus will be generally heard.

Treatment.—Extend the limb on a pillow; apply leeches and cold lotions to abate the inflammation. Raise the thigh over an inclined plane, after having passed a wide bandage round the pelvis, and elevate the trunk to an angle of about forty five degrees. Any attempt to depress the upper part of the bone would be fruitless, and only increase the sufferings of the patient.

Fracture of the Middle of the Femur.—This injury is easily discovered, as one extremity of the bone generally rests upon the other, and this is readily detected by passing the fingers along the front and sides of the limb. There is also crepitus on moving the limb.

Treatment.—Extend the limb, adjust the fracture, apply leeches and cold lotions if necessary, aud then an eighteen-tailed bandage. Place the limb on the double inclined plane in the manner described for fractures *external* to the capsular ligament.

Fractures of the Patella.—*Transverse.* The upper portion of the bone is drawn upwards, and the lower remains in its normal situation. The leg is to be extended, and the trunk bent forward, a bandage applied over the upper portion of the bone, and above the knee, and is to be passed under the ham and round the tibia, describing the figure of 8 round the knee joint. Some apply straps and buckles. The patient must be confined to bed for five or six weeks.

Longitudinal.—Extend the limb, apply a bandage, and keep the fractured pieces in apposition, when a speedy union will generally take place.

Fractures of the Leg.—Pain and deformity of the limb, inability to move it without pain, and crepitus on pressure, or by rotating the limb, indicate this injury.

Treatment.—When the tibia and tibula are fractured, the knee should be bent, apply a soap plaister and eighteen tailed bandage, then a splint under the leg, extending from above the knee to below the ankle, the foot being supported with pillows and bolsters. Another splint should be placed on the upper surface of the limb, and also extend beyond the knee and ankle joints. The patient lies on the injured side, so that in turning on the other, the inferior splint may be exterior or superior. The limb should be kept as immovable as possible, as in all other fractures, and consolidation of the bones may not be perfected for eight or ten weeks.

Fractures of the Tibia.—Draw the fingers along the anterior edge of the tibia when the slightest inequality will be readily perceived.

Let the upper part of the tibia be held by an assistant, and the lower portion pushed upwards, when a crepitation will be often heard. This sign is not always present, as the fibula does not allow but very partial movements of the fractured bones.

Treatment.—Apply a soap plaister, the eighteen-tailed bandage, and a splint of wood and leather, or tin, which is to extend from the outer surface of the knee to the side of the foot. It must be so constructed as to receive the upper and lower heads of the fibula and hollowed so as to receive the prominent muscles of the outer surface of the leg. A shorter splint is then applied on the inner surface of the tibia, and this should only reach to the head of the bone.

Fracture of the Tubercle of the Tibia, with laceration of the Legimentum

Patellæ.—The tubercle is moveable and far below the inferior edge of the patella, when compared to the sound one.

Treatment.—Adjust the fracture, and secure it in the same manner as fractures of the patella.

Fractures of the Fibula.—These fractures are not easily discoverable, on account of the support of the tibia, which enables the patient to walk a little, or bear upon the foot. There is pain, swelling, and ecchymosis near the fracture, and sometimes crepitation, or inequality on drawing the fingers along the bone.

Treatment.—Adjust the fracture, apply a soap plaister, and a hollowed splint, with layers of lint, which is to extend from the knee along the outside of the foot, and then the eighteen-tailed bandage. Place the patient on a mattress, and the lint on the outside of the leg and foot. Be careful that there is no obliquity of the foot or ankle, or there will be deformity.

Fractures of the Bones of the Foot.—*Os Calcis.*—Inability to stand or walk, retraction of the heel, pain and swelling near the injured part, and crepitation, indicate this fracture.

Treatment.—Apply a bandage on the foot and round the ankle, let it ascend to the ham, the foot being previously extended, and it is to be tightly drawn.

Fractures of the tarsus, metatarsus, and *phalanges* of the toes are to be treated in the same manner as those of the *carpus, metacarpus,* and *phalanges* of the fingers. These fractures require from six to ten weeks or more, for their consolidation; and there is considerable danger of lameness, if the patient exerts the limb too soon.

Fractures and bending of the long bones in children.—The bones are easily fractured in children. They may be partially broken, like a piece of wood, or only bent. In such cases absolute rest, splints and bandages, with cold lotions, are necessary.

Non-union of fractures.—Premature motion of a fractured bone will prevent its consolidation. The extremities of the fractured bones become smooth, there is an attempt to form a joint which is effected by ligamentous, or cartilaginous tissue

In some cases, however well the bone is adjusted and kept immoveable, ossification of the fracture will not take place. This arises from peculiarity of constitution.

Treatment.—Let the limb be extended and counter-extended by assistants pulling it in opposite directions, and the fractured ends of the bone separated from each other; then pass a seton through the elastic substance between them. In introducing the needle, avoid the principal nerves and blood-vessels. There need be no restraint or any particular position of the limb for a few days, until the seton begins to excite irritation or inflammation, and the bandages and splints should be applied as in recent fractures. A cure cannot be expected sooner than three or four months.

CONVERSATION
AT
THE ROYAL COLLLEGE OF PHYSICIANS.

March 3.

The first conversation meeting for the season took place on Saturday evening last, and a more distressing failure in talent, respectability, or attraction of any kind, though abundant in quantity, was never witnessed within the gloomy walls of the building in Pall Mall East, even in its most balmy days. A few minutes past nine o'clock, Sir Henry Halford, in company with the Rev. Father in God the Bishop of London, arrived, and soon after the learned baronet made his appearance, followed by six or seven sombre looking personages in addition to the bishop. That Sir Henry, with his usual courtesy, sent the oration to Lord Melbourne for his lordship's edification is true; and also Lord Melbourne expressed in a note addressed to Sir Henry, the extraordinary delight he felt in perusing it; but it was by some deemed unkind upon his lordship's part not to have honored the learned baronet with his presence, an event so anxiously desired by the college, or at least not to have used his influence with some of the members of the cabinet to have patronized the display; if his lordship anticipated he might have been prevented by political engagements from being present.

Letters of invitation had been also dispatched by the indefatigable Sir Henry to the Duke of Wellington and

Sir Robert Peel; but we fear the illustrious duke had quite enough in the late Hunterian oration to satisfy his craving for medical orations; and Sir Robert must have had too much business on his hands at the present time to feel any interest in *medical* ASSOCIATIONS.

The library was crowded to suffocation by all grades in the profession. There were pures of both kinds—general practitioners of every degree—chemists—druggists—medical booksellers—cutlers—a slight sprinkling of briefless barristers, with one or two expectant curates, but very few of the members of the college. The mass of auditors was divided into two distinct phalanxes by the cold March wind which rushed across the centre of the room every time the door was opened, and while the phalanx near the accomplished orator was on eager tiptoe to catch something of the olipodrida of Greek, Latin, and English which was served up for their enlightenment, the phalanx in the rear kept up a brisk chat amongst themselves, which was now and then interrupted by calls of silence from those who formed a kind of boundary between both. The learned Sir Henry, after sundry bows, delivered himself of an oration upon the effects of cold upon the human body. He commenced by stating the *new* and *interesting* anecdote of one Dr. Solander having fallen asleep from the effects of cold; notwithstanding that the Doctor had a few minutes before warned his attendants not to give way to the influence of Morpheus, which if they did would prove fatal, the next stated *the astonishing fact*, that intense cold, applied to a small surface of the body, produced the same effect upon the skin, muscles, &c. as an opposite degree of heat; the gifted orator proceeded to account for the manner in which cold produced apoplexy, which he did in a manner highly satisfactory to himself; the rationale of which, together with the reciprocal influence of the brain, heart, and lungs upon each other, would have been highly *original*, but that Brichat unfortunately wrote all which the worthy baronet said, nearly twenty years ago, in his work on Life and Death. After a few statistical observations *equally original*. the effects of cold upon the blood-vessels in producing gangrene was enquired into, and the gangrene of the lower extremities, called gangrena senilis and Pott's gangrene, on account of the inimitable description this surgeon has left us of the disease, was stated to be the effect of *a similar condition of the blood-vessels*; viz. *ossification of their parietes and coagulation of their contents!*

These were the main points touched upon by the learned President of the College of Physicians, and without entering *deeply* into any of them, Sir Henry so poetically interlarded the entire composition with quotations upon cold from Homer, Virgil, Horace, Juvenal, Shakespeare, and even Milton, that were it not for the intense animal heat which was generated by the incongruous mass, and the *hot* tea which so speedily followed the oration, no other consequence could have been reasonably anticipated, but that each listener, and the eloquent orator himself, would have speedily presented individual specimens of *human icicles!*

MEDICO-BOTANICAL NOTES.

By THOMAS CASTLE, M.D. F.L.S.

PERSIAN MANNA.

THE shrub which affords the article called "Persian or Hebrew manna," is the *Alhagi Maurorum* of Tournefort,* a small shrub belonging to *Diadelphia Decandria*, in the Linnæan arrangement of plants, and to the natural order *Leguminosæ* of De Candolle. It is a native of the districts of Egypt, Syria, Mesopotamia, and other eastern countries. In altitude it varies from two to three or four feet. The stem is shrubby. Leaves simple, obovate-oblong, with minute stipules. The flowers are purple in the middle, reddish about the edges; and disposed in racemes along the peduncles. The Calyx, is five-toothed, bell-shaped; corolla papilionaceous, with the petals almost equal in length, the vexillum obovate and complicated, the keel straight, obtuse, and the alæ rounded at the apex. The stamens are ten in number, united into two sets. Ovary linear; style filiform, acute. The seed vessel is a roundish, slightly-uneven legume, which is rather woody, stalked, few-seeded, and without joints. Seeds kidney-shaped. The plant has

* Hedysarum Alhagi, *Linnæus.*

been cultivated in our green-houses for the last century, produces its flowers in July and August, but yields little or none of the manna for which it is so celebrated in Mesopotamia.

Persian manna* is a natural exudation from the leaves and branches of this shrub, which takes place only in very hot weather. At first the manna resembles drops of honey, but soon thickens into yellow, reddish, or brown grains about the size of coriander seeds, when it is carefully collected, and valued according to its purity, which is known by the distinctness of the granulations. It is principally gathered about Tauris, where the plant grows plentifully. Sir G. Wheeler also found it growing in Tenos, and Tournefort met with it in many parts of Armenia and Georgia. In chemical and medical properties it is similar to the manna in common use in this country. Bib. Ref.—*Tourn. cor.* 54 *t.* 489. *G. Don. syst. ii. p.* 310

NUGA BRASILETTO.

This tree, the *Nuga Brasiletto* or *Cæsalpinia Nuga* of Aiton,† is a native of the Moluccas, where it is called by the specific term *Nuga*. By De Candolle, it is comprehended in the natural order *Leguminosæ*, and in the Linnæan system it belongs to *Decandria Monogynia*. In stature it is more or less lofty. The leaves with three or four pairs of pinnæ, each pinna bearing two or three pairs of egg-shaped, acute leaflets. The primary leaf-stalk is prickly beneath. The flowers, which are in racemose panicles, consist of a five-lobed, cup-shaped, glabrous calyx, five unequal petals, the upper one shorter than the rest, ten stamens, and a thread-like style. The seed-vessel or legume is unarmed, flat, two-valved, one or two seeded, short, and ends in an incurved mucro. Seeds very thick, transversely oblong, compressed; and the embryo with an elongated plumule. Like other species of Cæsalpinia, the wood is used for dyeing; and the root possesses diuretic properties, but it has not yet obtained reputation with us. Bib. Ref.—*Rumph. amb.* 5 *t.* 50. *Ait hort. kew.* 3. *p.* 32.

COMMON BRASILETTO.

The *Cæsalpinia Brasiliensis* of Linnæus, is a valuable tree, about seventy feet high, native of Jamaica, St. Domingo, and in all probability, as its name would imply, of the Brazils. It differs from the previous species in the leaves bearing from seven to nine pairs of pinnæ, each pinna bearing about fifteen or sixteen pairs of oval-oblong, obtuse, glabrous leaflets; the leaf-stalk without prickles; the calyx pubescent; the flowers disposed in loose panicles; the legume acuminated at both ends; one-seeded; and the seeds flat. It is this tree which yields the *Brasiletto* or *Brazil-wood* of commerce, an article very extensively used for its red dye. It is elastic, tough, durable; bears a fine polish; is of a beautiful orange and red colour; abounds in resin, and by infusion yields an elegant tincture. In medical properties Brazil-wood is slightly astringent, in which character it is not without service in ordinary cases of diarrhœa and other alvine evacuations. Bib. Ref.—*Lin. spec.* 544. *De Cand. prod. ii. p.* 482.

In dismissing the Brasilettos, it is necessary to observe, that other trees yield a similar kind of wood, commonly called by the general term *Brazil-wood*. On these trees and their products, I shall make a few remarks in some future notes.

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* Trunschibil, Tarandyubiu, *Persian.*

† The Guilandina Nuga, *Linnæus.*

SPIRIT OF THE BRITISH MEDICAL SOCIETIES

During the last Month.

Though the discussions at these useful and entertaining assemblies are frequently abounding in theoretical speculations, yet there is nevertheless a vast quantity of really useful and practical information to be obtained from them. It is the practical portion which we consider to form their spirit, and it is to this we intend to limit our notice. We may throw out, however, a word, *en passant*, respecting the introduction of abstract questions in the midst of a debate on a practical point, speculations which, however much they may gratify the vanity of the speaker, tend little to the instruction of the audience, and generally serve to confuse a subject otherwise easily and clearly understood. We have had occasion to lament the "throwing out this question," as it is called, more than once, and we believe

we are not solitary mourners, over these fancies that merely

" Shew the stretch of human brain,
Mere curious pleasure or ingenious pain."

The influenza has formed the chief "apple of discord" among the members of societies during the last month; and though there never was a subject upon which opinions so diametrically opposite were broached, it is curious after all to observe, how in the main feature almost all practitioners agree. It appears, then, from all we have heard on the subject, that the influenza is an affection in some way depending on atmospheric causes, but on what particular one is uncertain—that it can scarcely in itself be denominated a disease, but, as was justly observed by a talented surgeon at the London Society, seemed to have an influence in bringing into action those diseases to which the parties attacked were most predisposed. There was, however, a certain train of symptoms characterizing the affection which could not be mistaken, the most prominent being pains in various parts of the muscular system, and in the frontal sinuses, sneezing, lacrymation, and catarrh. In general this train of symptoms was very mild, and much more so in some localities than others, and little or no medical treatment was required. Occasionally, however, inflammation, and that of an active kind, has attacked the brain or serous tissue of the lungs, and small, cautious bloodlettings have been found necessary. Indeed it would be absurd to attempt to lay down any plan of treatment to be pursued in all cases, there never was an epidemic which varied more in particular cases, and in which the plans of treatment were occasionally more opposed. We do not mean to assert that active antiphlogistic treatment was frequently necessary, because in the majority of instances there is little doubt, from the extremely debilitating nature of the affection, that blood-letting could not be safely resorted to. But instances have certainly occurred in which the use of the lancet was imperatively called for, though not to the extent that would have been necessary under a different state of atmosphere. Cathartics, diluents, and confinement to bed, have been found sufficient in most mild cases to *cure* or rather *palliate* the symptoms.

The fatal cases have been those in which pneumonia, bronchitis, and pleuritis have supervened on the affection, or when the person attacked has laboured under asthma, or any other chronic affection of the organs of respiration;—the first cases perishing from the intensity of the inflammation coming on in the debilitated form, the second from want of power in the patients to expectorate. The post mortem appearances in those which have perished have differed nothing from such cases on ordinary occasions. The fatality among the old sufferers from chronic bronchitis, and those having a tendency to phthisis, has been very great.

A case has been related in which mercury given to salivation has succeeded in arresting the growth of several exostoses occurring in a young woman who never had syphilis. The great peculiarity in the affection was the low specific gravity of the urine, and its almost entire deficiency of urea, and the phosphates; as the mercury began to affect the system the specific gravity of the urine rose considerably. Several members of the society had tried mercury in cases of exostosis unconnected with syphilis, occasionally it did good, but more frequently was of no benefit. Iodine also had been employed to some extent, both internally and externally by some members in this disease, without any effect, "except injuring the constitution of the patient," but we strongly suspect there was a bad medicine, or that it was not properly combined.

Cases of purulent discharge from the vagina of female children, simulating gonorrhœa, have been noticed by members to occur in weak, scrofulous, and dirty children; simple ablution with goulard water, and mild aperients, have soon arrested the disease, "proving that it was not the result of venereal infection," &c.*

A drawing of an excrescence which had grown from the tricuspid valve was exhibited; the patient perished of pneumonia supervening on the epidemic; he was an intemperate man, and had had frequent attacks of venereal

* We are astonished that nobody has quoted, that this discharge in young girls was not infrequently caused by the presence of worms in the bowels, and generally cured by gentle purgatives or anthelmintics.

disease. During the patient's life there was no reason to suppose any affection of the heart existed. It was supposed that the margin of the valve had become ulcerated, and formed a nucleus for the fibrinous portion of the blood to deposit. The tumour bore a great similitude to the cauliflower excrescence, but was not so vascular as those growths generally are.

PROCEEDINGS OF SOCIETIES.

BOTANICAL SOCIETY. FEB. 16.

J. E. Gray, Esq. President, in the Chair.

After the minutes were read and presents announced, Mr. G. E. Lewis read a paper, being chiefly a translation from M. de Bouche (or Dutrochet?) on the natural order *Ranunculaceæ*. He commenced by describing the general characters of the order; the most important of which is, the number and situation of the stamina; these being always more than 20 in number, and seated upon the receptacle, below the seed-vessels. This very extensive order contains 29 genera, and 632 species, comprehended in five tribes. About one-fifth part of the species are distributed throughout Europe; North America contains about one-seventh; South America one-seventeenth; and India one-twenty-fifth. Very few are found in Africa, except on the shores of the Mediterranean, and 18 species have been discovered in New Holland. The whole of the order are early flowering plants, and many possess extremely poisonous properties. Although it is said that horses eat all the species with impunity, yet cattle will only eat the *caltha palustris* or or marsh marigold. There is not one exception in the genus ranunculus to the highly acrid properties of the species: this quality is so predominant, that by mere outward application, an inflammation is very speedily excited, and severe blisters are produced by its means. Mr. Cooper remarked, that when taken internally, he had found warm water to be a very good antidote to its poison. The curious diversity in the shape of the petals in the plants of this order was next alluded to; after which the author made some remarks on the curious metamorphoses of the stamina, pistils, and nectary, into the corolla, and sometimes into leaves; on which subject he felt inclined to adopt Linnæus's, rather than Goëthe's theory. Mr. Meeson alluded to the affinities of the ranunculaceæ with the umbelliferæ, which, after some further remarks, concluded the business of the meeting.

ROYAL INSTITUTION. FEB. 17.

Dr. Faraday delivered a lecture explanatory of Dr. Marshall Hall's new theory of the existence of a *reflex* function in the spinal marrow, which had been brought forward at a late meeting of the Royal Society. He afterwards exhibited and explained the principle of construction of Mr. E. Cowper's printing press; and concluded by drawing attention to some experiments which he had himself recently instituted, with a view to see how far the researches of Mr. Crosse were correct, as these were still doubted by many. He exhibited an animalcule of the order protea, which had been obtained by Mr. Crosse, by a continuous voltaic stream from silicate of potass; as well as some insects from hard polished stone; and which were now, like those of Mr. Crosse, enjoying life after a transition of perhaps many thousand years.

CASE OF CHRONIC HYDROCELE, COMPLICATED WITH HERNIÆ,

EFFECTUALLY CURED BY INJECTION.

By G. Langstaff, Esq. M.R.C.S.

The following is a case of very considerable interest, for as its title indicates, though the hydrocele was cured by injecting the sac with a stimulating fluid, yet the severe effects of the operation were such as to induce Mr. Langstaff to publish the details, in order to warn the profession of the impropriety of performing such an operation on those patients who are far advanced in life—and for the cure of an ailment, the alleviation of the symptoms of which alone, ought to be deemed quite sufficient. We cannot too warmly applaud the good feeling which prompts individuals of good experience like Mr. Langstaff, in detailing cases which pures very carefully conceal, but a knowledge of which materially contributes to the advancement of practical learning.

In March, 1821, I was requested to visit Mr. ———, who complained of an

enlargement in one of his testicles, which had been gradually increasing for twelve months, and, from its size, rendered him very uncomfortable. On examination, I found a hydrocele, of immense magnitude, on the right side, a large scrotal and a femoral hernia on the same side, and an inguinal hernia on the left.

The herniæ had never produced any unpleasant symptoms, and were easily reduced. I recommended a proper truss to be made, and advised the patient to have the fluid drawn off from the hydrocele, to which he acceded. The scrotal hernia was reduced by an assistant, paracentesis was performed, and nearly two pints of fluid were evacuated. The truss prevented the protrusion of the femoral and inguinal herniæ; but, in consequence of the extraordinary size of the ring of the scrotal hernia, the internal and external rings having become united, this hernia protruded, although the truss was well constructed.

In the course of three months the hydrocele increased considerably; paracentesis was again had recourse to, and was repeated every four months for nearly three years. The patient becoming very dissatisfied with the encumbrance which the enlargement occasioned, and annoyed at the necessity of submitting to so many operations, felt anxious to have something done to effect a radical cure. I stated to him the uncertainty of curing a chronic hydrocele by injection, and, in vain, dilated on the dangerous consequences which were likely to result at his advanced period of life (77 years). He *would* have the operation performed.

On the 10th of August, 1830, I tapped the hydrocele, and drew off nearly a pint and a half of transparent fluid. I afterwards injected nearly the same quantity of a solution of sulphate of zinc and water, in the proportion of one drachm of the sulphate of zinc to a pint and a half of water, which was allowed to remain for twenty minutes in the tunica vaginalis, and did not occasion any pain.

A few hours after the operation, the patient began to complain of pain in the testicle and spermatic chord; the testicle appeared to enlarge, in a manner similar to that of hernia humoralis in severe cases of gonorrhœa. Leeches and cataplasms were applied, and proper medicines were given to subdue the febrile action, but without effect. The pain in the testis became very distressing, the swelling increased, the temperature of the scrotum and spermatic chord was greatly raised, and the fever was much heightened. These symptoms, in spite of the most active treatment, continued for nearly a week; the integuments of the scrotum became very red; the cutaneous veins greatly dilated, and fluctuation was detected, secretion having taken place in the tunica vaginalis.

Under these alarming symptoms I did not hesitate to make an incision, with a double-edged scalpel, into the tunica vaginalis, which was followed by a discharge of four ounces of pure pus. After this operation all the dangerous symptoms gradually subsided, and by proper attention to his health the patient soon recovered, and what was very gratifying to him and myself, a perfect union of the tunicæ vaginalis and albuginea was produced.

During the last three years the bodily and mental powers of this person gradually declined, and he died on the 3d of October, 1836. I obtained permission to inspect the body, but did not think it necessary to examine any part except the herniæ and testes. The following are the appearances which they presented:—

Neither the sac of the scrotal hernia of the right side, nor of the inguinal on the left, had undergone any morbid change. About three ounces of fluid were found in the tunica vaginalis of the left testis; the structure of the gland and the epididymis was perfectly healthy; the vas deferens and spermatic artery and veins were injected with size and vermilion; the hernial sac and tunica vaginalis were afterwards removed to show the blood vessels and vas deferens. A longitudinal section of the testis was made; its structure appeared to be perfectly natural; and the tube of the vas deferens was pervious. The tunicæ vaginalis and albuginea were much thickened, and agglutinated by a firm deposition of organized lymph, similar to what is usually seen in chronic pericarditis.

I have dissected many hydroceles, some of which had been cured by injection, but I never saw such a complete union of the secreting surfaces as in the present instance, for hydroceles

which have been injected are generally, on post-mortem examination, found to be only partly adherent. I publish this case to show that a radical cure of chronic hydrocele may be effected in a person of advanced age; but from the severe symptoms which followed the operation, I should not recommend the practice which I pursued, but think it would be more advisable merely to perform paracentesis, when the accumulation in the tunica vaginalis became troublesome to the patient.

It may, perhaps, be imagined that the favourable result in this case was not produced by the injection solely, but was partly attributable to the incision made into the tunica vaginalis. It is a singular pathological fact, that the testicle, which was supposed to be enlarged from the effects of inflammatory action, did not exhibit any morbid structural change. Sometimes, in cases of gonorrhea, one or both testicles become affected with what is termed "hernia humoralis." The question is, whether the substance of the testis itself is the seat of the disease; or whether it may not be confined to the tunics of the gland, and more especially so when hernia humoralis is consequent on the injection of the sac of a hydrocele. If the inflammatory action began in the testis, and sympathetically affected the tunicæ albuginea and vaginalis, I should imagine that its functions would be materially impaired, and that, on examination, some morbid deviation from the natural structure would be observed.

22, New Basinghall-street,
—*Lancet.*

COLD AFFUSION IN ILEUS.

Recommendation of Cold Affusion on the Abdomen in Ileus. By JULIUS WOLFF, M.D., *Liverpool.—Cases occurring in the Medical Practice of* J. PEACOCK, M.D., *Darlington.*

THE following cases and observations on the beneficial effects of sudden affusion of cold water on the abdomen in Ileus, appear to be of great practical importance.

A. D., merchant in this town, was at a convivial party on the 3d of November. It appears, according to his own statement, that he then took an unusual quantity of wine. At twelve o'clock at night he went home. On going to bed he fell down stairs, when his abdomen came in contact with a stone, in consequence of which severe inflammation within the abdomen took place. Notwithstanding five bleedings, the frequent application of leeches, (which were applied four times, twenty leeches at each application), the inflammation increased.

On the 9th of November, vomiting of fæcal matter appeared. Up to this time the bowels could not be moved, although the most powerful aperients were administered, and linen dipped in cold water was also applied. I then ordered cold water to be poured on his abdomen, and to be repeated at short intervals. Four hours after this he had strong evacuations, the vomiting ceased, and the patient was saved.

The intention of communicating this case is to draw the attention of the profession to the efficacy of cold water in ileus, which at first was recommended by a German physician, (I think Brandeis). I remember four cases of ileus, (without hernia,) one in Germany, two in France, and the present case, in all of which very powerful remedies were applied, viz. croton oil, injection of tobacco, &c., but all were useless. The effect of the cold water in three of the cases was evident. In one case, where a lady had this disease, the application of cold water was refused. She died.—*Lancet.*

CASES OCCURRING IN MEDICAL PRACTICE.

By J. PEACOCK, M. D., Darlington.

Successful employment of Oil of Turpentine in Traumatic Tetanus.

OIL OF TURPENTINE IN TETANUS.

CASE 1.— Elizabeth Copperwaite, aged eleven, the daughter of Robert Copperwaite, of Darlington, had the sole of her foot pierced by a thorn, which was extracted with some difficulty. I was called in on the fourth day after the accident. She complained of her throat being dry and sore, and I found the larynx enlarged and prominent, and the muscles of the neck rigid and very painful; her face was much flushed, and a copious perspiration covered her whole body. The first time that I saw her, her pulse was 95; in the

evening of the same day it was 105, and during the day she had sometimes complained of a sudden very acute pain at her *heart*, as she said. There was much difficulty in mastication as well as deglutition, but she could get a small morsel of boiled barley down more easily than her tea; the wound had healed up entirely. There was now no doubt that this was a case of *Traumatic Tetanus*. Nothing had passed through her bowels since the accident, so I gave her immediately a good smart dose of calomel, scammony, and jalap, but as it did not take effect in three hours, I repeated it, when the medicine acted very briskly. I had long made up my mind, that when I met with a case of tetanus I would make trial of the ol. terebinthinæ, so I immediately gave her xii drops in a little mint tea; I repeated this every three hours, so long as she had occasion for its use, and in twenty-four hours the muscles were sensibly relaxed. I think that I made her continue it during four days, and then she discontinued it altogether. The medicine was not attended with any inconvenience to the urinary organs.

During the time that the child was suffering, the mother was constantly soliciting me to promise her that "when the child recovered she should again be as *canny* as ever." The purport of this request I confess I did not at first understand, but when the muscles were set at liberty, I found that a very beautiful child was restored to its anxious parents, a result which I could not have guessed whilst the child was suffering.

Case 2.—A young lady, aged seventeen, who lives about three miles from Darlington, wounded her hand with a rusty nail, in a very slight way, so as not to draw blood. In a few days her hand and arm became stiff, and very painful on motion, as well as the jaws and the muscles of the neck and throat. She was chiefly attended by my partner, Dr. Macfarlan, who had not joined me when the first case was under my care; but as soon as I related the effect to him, he lost no time in administering the turpentine, and after a hard struggle, there was every reason to believe that it was made the means of restoring her health. To be sure, the wound was laid open more than once, and many topical applications were used, such as poultices, fomentations, &c., but as these measures were never before known to be successful in traumatic tetanus, we may fairly give to this medicine the credit of the cure. It would give me much pleasure to hear that some of the hospital surgeons had made a trial of it.

About twenty drops, in a little mint-water, would be a proper dose for an adult.—*Lancet.*

MORBID APPEARANCES IN AN AGED BEDRIDDEN PERSON.

Account of some remarkable Morbid Appearances observed in an Aged Bedridden Person. By John Collier, Esq. M.R.C.S. of Brackley.

John Evans, of Towcester, aged 75, died 19th September last. He was very corpulent, and large in stature; his faculties were good almost to the last; his disposition was irascible; only a few months before death he attempted to cut his throat.

His appetite for food was not bad, and he rested tolerably well at night, considering his infirmities. Bowels generally regular; voice strong.

A difference of opinion prevailed respecting the disease he laboured under: some supposed him to be the subject of calculus, though the symptoms of this were obscure. Many years ago he was a patient in the Northampton Infirmary, under the care of the late Dr. Ker; but after remaining there for many weeks he was discharged, his case being considered too obscure to admit of any immediate or beneficial treatment. Notwithstanding his labouring under the above symptoms, together with an irreducible inguinal hernia on the left side, it was conjectured by many persons that his complaints bore stronger indications of imposture than of real disease.

On dividing the integuments of the abdomen, a thick layer of fat was cut through, an inch in depth, before arriving at the tendinous expansion. The parietes being divided, and the viscera exposed, the peritoneum was found healthy, containing about half a pint of serum tinged with blood. The great omentum was curled upwards to the arch of the colon. Stomach and intestines looked healthy. The liver rather small, of a pale brown colour; its structure by no means firm. The gall-bladder contained forty-five calculi, the size

of small peas with a small quantity of green bile; ducts pervious. In the right kidney were found seven calculi, embedded in its substance, each about the size of a nutmeg, forming a sort of cluster. The left kidney was devoid of such obstruction, though its structure was much softer than natural. The right ureter was pervious and healthy; the left was somewhat larger, and within it were found three irregular portions of calculous concretions, just at its entrance into the pelvis: how long they had been lodged there it is impossible to say. In short, the right kidney and left ureter presented an aspect totally different from the left kidney and right ureter.

On cutting through the urinary bladder, a large calculus was found inclosed in the fasciculi of the viscus, just behind the symphysis pubis. When removed it appeared smooth and firm, of an oblong shape, and weighed twelve drachms and one scruple! composed of phosphate of lime. I think it not improbable this stone had existed a great length of time. Two small calculi were found lying loose in the cavity of the bladder, near its base; these were of the same consistence: one weighed a drachm and a half, the other two scruples.

The coats of the bladder were much thickened; its mucous lining exhibited much redness. The prostate was not larger than usual for his age.

It would appear that the urine was principally secreted by the left kidney, as being the more healthy of the two, The patient voided his urine at proper intervals, without much difficulty. I do not think he ever required the catheter of late years; but I am informed that he frequently had a discharge of fluid from the umbilicus, exactly resembling urine both in smell and colour. He had always been of a temperate habit. I am, sir, your obedient servant,

JOHN COLLIER, M.R.C.S.

Brackley.——*Med. Gazette.*

CASE OF SUPPOSED

RUPTURE OF THE INNER COATS OF THE BLADDER,

Without injury to the Investing Peritoneum.

BY WM. T. KEAL, ESQ., OF OAKHAM.

Early on Tuesday morning, Dec. 29, 1835, I was requested by a medical friend to accompany him a few miles, to advise in the following case: the particulars were communicated by my friend in our way to the village:—

The subject of the case was a young man, about two and twenty years of age: he had been labouring under stricture of the urethra about a fortnight, the consequence of a recent gonorrhœa, when he was knocked down by a horse, on the 26th, about noon. The horse in stumbling fell upon the lower part of the patient's abdomen; he felt pain soon afterwards about the pubic region, accompanied with a more frequent desire to pass his urine, which he accomplished with no more than the ordinary difficulty. In about eight hours after the accident the difficulty increased, and soon retention became complete.

Up to that period there had been no discolouration of the urine. The retention continued till Monday evening about eight o'clock, when he passed a moderate quantity, which relieved him from pain, and he slept from ten till two o clock. On awaking there was much pain, with an extreme desire to make water.

His medical attendant was now for the first time sent for, and upon his arrival, finding the retention accompanied with much agony, immediately returned home (a distance of two miles) for a catheter.

On his return the patient informed him, that during his absence, in attempting to evacuate his urine, he had experienced a sudden "crack" (to use his own expression), and an immediate sensation of cold pervading the pubic region, at the same time finding relief from the distressing pains under which he was previously suffering. Upon our arrival we found our patient comparatively easy, though there was tenderness of the abdomen, with a sense of distension, but no circumscribed tumour, as in cases of retention without laceration. I immediately suggested the introduction of the catheter, and at least two quarts of bloody urine were drawn off. The stricture caused considerable impediment to the introduction of the catheter.

The patient experienced much relief after the operation. The pulse being full, I advised a copious bleeding from the arm, to be followed by leeches to the pubic region, with subsequent fo-

mentations. I also suggested a saline aperient, afterwards calomel and antimony in repeated doses, and an opiate at bed time. It was considered essential to pay due attention to the frequent use of the catheter.

I did not see the patient again but was informed by my friend, that after using the catheter for two days, he was able to pass his urine without its aid, and was free from all abdominal pain; and he considered him recovered from the injury of the bladder. The stricture was subsequently cured, as was also an attack of orchitis. The patient has continued free from any consequences whatever of the injury.—*Med. Gazette.*

STRANGULATED INGUINAL HERNIA.

Case of Strangulated Inguinal Hernia; successful Operation and Recovery, with an account of a peculiarity of the contents of the sac. By Henry Taynton, Esq. M.R.C.S.

Samuel Hart, æt. 45, drayman, states that he has been subject to a rupture (oblique inguinal) on both sides for fifteen years, which he has always been able to return with readiness. Having lately obtained a new truss, and finding the pressure from it uncomfortable, he took it off on Saturday morning, December 30th. Shortly afterwards, whilst walking from the fire to the bed, the rupture on the left side came down, and he was not able to return it. He soon began to feel pain across the abdomen, attended with vomiting, which continued with little intermission. The rupture, which at first was not larger than a walnut, had been gradually increasing; and when I saw him, for the *first* time, on the following morning at ten o'clock, it presented these appearances:—Its form was pyramidal, measuring about six inches from the external abdominal ring downwards, and about three inches and a half in its transverse diameter; it had a tense and elastic feel; no pain was experienced upon pressing any part of the tumor, except at a point immediately over the seat of the stricture. He complained much of pain in the abdomen, just below the umbilicus, which was also aggravated upon pressure. The abdomen was soft and yielding; pulse 100, somewhat incompressible; tongue moist, and slightly furred; bowels not open since yesterday morning; countenance very anxious. After fruitless efforts to return the rupture, I bled him to faintness, and again renewed the attempt, but was equally unsuccessful. He was then ordered to keep ice constantly applied, and an active purgative was prescribed. At half-past two my father accompanied me to visit the patient. We found him nearly in the same state, but stercoraceous vomiting had supervened. After again employing the taxis, a tobacco enema was administered: great depression of the vital powers ensued, but the hernia continued irreducible. We then judged it better to leave him for an hour or two undisturbed, directing him to continue the application of ice, being determined, if after that time the hernia remained irreducible, to proceed immediately to the operation.

At half-past six, having once more endeavoured to return the intestine without any better success, I proceeded to perform the operation. It is unnecessary to describe all the stages of the operation: the sac having been exposed, there was considerable difficulty, on account of its great tenseness, in pinching up a portion for the purpose of dividing it. An opening being made, about four ounces of serum gushed out. When the sac was laid open, a large mass of coagulable lymph presented itself, having the appearance of calf's-foot jelly, only of a darker colour, not adherent, and which totally concealed the protruded intestine. This jelly-like substance, which formed the bulk of the tumor, being removed in one large mass, a moderately sized knuckle of intestine was observed, in a highly vascular state, with laminæ of lymph adherent to it, of the same colour as that contained in the sac. The sac itself was quite free from inflammation. The stricture being divided, the operation was completed in the usual manner. An opiate was given at bedtime, and he passed the night without much pain. In the morning he took some castor oil, which not having produced any effect at noon, an injection of warm water with some salt was administered. The bowels were soon freely opened, from which time he has recovered without one untoward symptom.—*Med. Gazette.*

HENRY TAYNTON.
Queen Square, Bloomsbury.

REMOVAL OF AN

OSTEO-SARCOMATOUS TUMOUR OF THE INFERIOR MAXILLA,

WITH PART OF THE JAW-BONE.

By George Smart, Esq. Surgeon, Hutton Bushel, Yorshire.

Wm. Hardy, 17 years of age, residing in this quarter, applied to me at about the beginning of last May, with an osteo-sarcoma of the maxilla inferior. He attributed its origin to cold, and sore throat, with swelling of the glands of the neck, which he had during the winter. The tumour was of about the size of a hen's egg, firm, immovable, and incompressible. It caused him a great deal of pain, and interfered so much with mastication, that he was under the necessity of living upon slops. The glands of the neck were not at this time diseased, and his general health was very good, and, as the tumour was rapidly increasing, I advised him to have the diseased body, and the piece of jaw to which it was attached, taken away, to which he and his relatives consented. The first of June was fixed upon as the day of operation, and preparatory to this the two bicuspid teeth were extracted, and a dose of aperient medicine was exhibited. My friends, Dr. Alexander, of Scarborough, and Mr. Munro, surgeon, of Filey, attended on the occasion. The operation was performed by my son, who is now a student in the metropolis, in the following manner:—An incision was made through the cheek, a little external to the left commissure of the mouth, down over the jaw. The knife was then pushed under the jaw, at this point, and carried back as far as the angle. An incision was then made through the integuments, from the angle to the temporo-maxillary articulation. A flap was thus formed, which was dissected upwards. The jaw was then sawn through, where the teeth had been extracted, the bone was depressed by an assistant, the temporal muscle was divided, then the pterygoids, &c., were cut through, and, lastly, the piece of jaw was disarticulated. The only arteries divided were the facial, the transverse facial, and the inferior dental, which were soon secured, the patient not losing more than an ounce or two of blood during the operation, which occupied nearly twenty minutes. In two hours after the parts were brought into apposition, by suture, and the cheek was slightly distended by pieces of lint. The patient's strength was supported by small doses of wine and brandy, administered at intervals. I have only to add, that in less than three weeks from the day of operation the patient was getting about, and I understand that he wrought at harvesting during the autumn.—*Lancet.*

The London Medical

AND

Surgical Journal.

Saturday, March 11, 1837.

SIR BENJAMIN BRODIE AND THE HUNTERIAN MANUSCRIPTS.

NOTHING could be more inconsistent with the well established character of Sir Benjamin Brodie, than the supposition that he, or indeed that any of the dependants of Sir Everard Home, could have participated in the monstrous crime of burning TEN FOLIO VOLUMES, besides many other papers, forming altogether, as appears by Mr. Clift's evidence, "A CART-LOAD," of the invaluable manuscripts of the immortal John Hunter.

The ignominy of that act has been, by universal assent, heaped upon the ashes of Sir Everard Home; and it is therefore surprising, that an individual of Sir Benjamin Brodie's caution and worldly prudence, should have thought it requisite in defence of his innocence in "the work of destruction," to have published *a letter* in the *Medical Gazette*, giving a solemn denial of his guilt; and the only excuse, for having come forward publicly on this occasion, was in consequence of some silly, and indiscreet allusions, which had been made

in the *Lancet*, about what the profession naturally enough expected from Sir Benjamin on the occasion of his Hunterian Oration.

NOTE FROM SIR B. BRODIE.

To the Editor of the Medical Gazette.

SIR,—I have *just* been informed that, in a weekly medical publication, which I am *not in the habit of reading*, it has been lately insinuated that I was in some way or another privy to the *burning* of Mr. Hunter's papers by the late Sir Everard Home.

I take the liberty of stating to the public, through the medium of *your* journal, and in the most unequivocal manner, that this is *wholly* and *absolutely* false. I knew nothing whatever of the transaction until I was made acquainted with it by *vulgar* report.—I am, sir,

Your obedient servant,

B. C. BRODIE.

14, Saville Row, Feb. 9, 1837.

[Since the above was received, the Lancet of this day *has come to hand*, in which the same *dastardly* insinuation is reiterated. The motive which leads the *anonymous scoundrel* by whom the articles in question are written to choose the present moment for *inventing* this slander, is too obvious to require any remark.]

All this must be perfectly satisfactory to those, if there were any such, who had the smallest suspicion, that Sir Benjamin Brodie, was either directly or indirectly implicated in the *burning* of what Mr. Clift so aptly described, as no less than a CART-LOAD of the valuable Hunterian manuscripts. What we anticipated on the occasion of the late oration, and what, indeed, the profession seemed to have expected from Sir Benjamin Brodie, was some account of the ROBBERIES,—some account of the *contents* of the cart-load of the Hunterian manuscripts, which had been burned by Sir Everard Home, and how far, and to what extent, the papers published under the name of HOME, were virtually the property of HUNTER. Though on this point the public may know a good deal, yet they will insist on knowing more, and the late oration would have been a most favourable opportunity for Sir Benjamin Brodie, to have come forward and manfully to have declared, of what *he* had *seen*, and of what *he knew* of the contents of these lost manuscripts, during the many years that he was employed, assisting Sir Everard Home, both in his private practice and his scientific pursuits. Sir Benjamin Brodie's silence on this most important point, therefore, leaves an unsatisfactory impression upon the public mind, and suspicion is the more aroused, from the coincidence of a life of John Hunter, having been at the same moment published;—a work which has been compiled, under the immediate cognizance of Sir Benjamin Brodie, and it is singular, that in this life, wherein the biographer has collected a list of all the writings of John Hunter, though the circumstance of the burning of the manuscripts is therein mentioned, yet no attempt has been made, to rescue from the numerous papers of Home, those which really and truly were the productions of John Hunter, and ought to have been transferred, in common justice and propriety, by the biographer, amongst the works of that great man.

Reviewing all the circumstances, not with regard to the *burning*, but the *plundering*, of Hunter's works it ap-

pears too evident, that all those connected with the CRIMINAL,—as well as the council of the College of the surgeons, and trustees and curators of the Hunterian Museum, not only have, but still consider it their bounden duty, to stifle all *investigations*, and crush all inquiry in a matter in which, every one of them is implicated, having been highly negligent of their public duty, in permitting the *worthy Baronet*, to retain the public property in his possession, until all attempts to reclaim it, were rendered utterly impracticable.

Until, therefore, the Parliamentary inquiry is resumed, or until the whole matter is brought before some other public tribunal, we need expect little light to be thrown on the precise extent of the robberies of the Hunterian plunderer by Sir Benjamin Brodie, or any of those pliable coadjutors who are now employing themselves in collating the writings, and recording the gigantic labours of John Hunter.

THE METROPOLITAN UNIVERSITY.

THE spacious apartments which have hitherto been occupied by the Royal Academy, have been taken for the use of the New University, and the first meeting took place therein on Saturday last.

They proceeded to divide the members into the different senates, and a committee was formed for the purpose of arranging the various duties and qualifications of a Registrar, and it was farther agreed, that candidates for the office should be advertised for in the public papers. This looks well as a commencement, and it is the more necessary, as, for some time past, a good deal of jobbing has been going on to obtain the office, and a certain individual has even vaunted of his success. We most sincerely hope, that no member of the Medical Profession will be appointed to such a situation, as the habits and pursuits of men of any eminence or character, totally unqualify them for the appointment.

To the Editor of the London Medical and Surgical Journal.

THE CHAIR OF SURGERY IN UNIVERSITY COLLEGE.

SIR,

I confidently rely on your impartiality for the insertion of this letter, in answer to some editorial remarks contained in your Journal of the 25th of February, headed "Surgical Chair of the University College; abortive attempt to displace Mr. Samuel Cooper." There is, Sir, a tone of feeling running through the entire article which would lead many to suspect that it must have emanated from some envious rival of Mr. Liston, rather than from an independent medical journalist.

Some of the assertions made in the article in question are so palpably inconsistent that they overthrow themselves, but there are others, which bearing more the appearance of facts, lead me to suppose you have been sadly misinformed regarding the true statement of the case.

In the first place you state that an attempt has been made to deprive Mr. Cooper of all or part of his chair of surgery in our college, and then you go on to speak of Mr. Liston's operations in the hospital as "theatrical exhibitions," and the style of the operator to be that of a "dexterous knifesman." You then proceed to say, Mr. Liston is not qualified to fill the office of lecturer; and that he was never led to expect a professorship in the University when appointed surgeon to the hospital. You then state that he migrated to St. George's Hospital to rival Mr. Cooper, and that this step was resorted to for the purpose of annoying the medical committee of the University; that they rejoiced at the proceeding, and hoped that they had "got rid of the would-be professor on the most favourable terms." You then proceed to talk about the

military tactics of Messrs. Cooper and Liston, and finish with a quotation from a journal famed for its *veracity;* and to complete the consistency with which the article is written, your next number contains a letter respecting the said veracious journal, charging it with "perverting the truth of misrepresentation and misstatement."

"Now, Sir, how stands the matter regarding the attempt to remove Mr. Cooper from his chair? why simply as follows: It has been a matter of surprise and regret during two sessions, that Mr. Cooper has persisted in giving the whole of his course unaided; for in the operative portion he has not given satisfaction to the generality of his class. Mr. Liston was naturally looked to as the proper person to join Mr. Cooper, and it was generally expected that he would have been requested to do so. But it appears that our professor of surgery could "bear no *rival* near the throne," so he himself requested that Mr. Richard Quain should this session assist him in the practical part of his course! Why was Mr. Quain chosen before Mr. Liston. It would be curious to know what his claims are to be a teacher of practical surgery. That there are many pupils in the University will be satisfied with this appointment I believe, but there are many others who will not. On which side of the question, I would beg to inquire, does there appear to have been most intriguing going forward. Was there no intrigue necessary to keep out Mr. Liston against the wishes of a vast number of students, and to appoint a much less experienced surgeon instead of that gentleman? I leave this to be decided by the candid reader. You state that Mr. Liston had no hopes held out to him of obtaining a professorship in the University; this is not strictly true, such expectation was held out to him; but let that pass. Who has maintained the reputation of the North London Hospital, not by operations alone, though in this department of his profession Mr. Liston has surprised the witnesses of his operations with the dexterity which he uniformly displays, but by every kind of instruction which makes an hospital the most valuable field of medical education. By practical and diligent attention to all the requisites of clinical instruction, both in the wards and in the theatre, where his lectures are attended by five or six times the number of pupils that present themselves at the other clinical lectures. Yet it is said Mr. Liston is "incapable of filling the surgical chair." The pupils surely do not think so, or why crowd to his lectures at the hospital?

Your charge against him for lecturing at St. George's is curious. Had he wished to annoy the medical committee, most persons would think he would have chosen a nearer spot to the University, instead of going a distance which would almost preclude any university student from attending his lectures; some few, however, I believe, have entered from that establishment, notwitstanding the distance. No doubt the medical committee were glad to "get rid of him on the most favourable terms," to use your own words. Now had he never had any expectation held out to him by that committee, of having a chair or part of a chair in the University, why were the committee glad to get rid of him? why because he was a stumbling stock in their way! they knew they could not pass him over, even if the expectations were *not* held out to him, and they hoped this would be a sort of excuse for electing Mr. Quain in his stead. Is not this the real reason of their rejoicing at Mr. Liston's lecturing at St. George's? You charge Mr. Liston with intriguing. In what way? By attempting to remove Mr. Cooper from the chair. How do you prove it; by a letter in the Lancet, and a paragraph in the Medical Gazette! which paragraph is not correct. Now, Sir, I would ask, have there been no intrigues going on to prevent Mr. Liston ever getting a chair in the University? Have there been no intrigues to keep down his popularity with the pupils, by fettering his clinical lectures as much as possible, in not allowing him to perform amputations, &c. on the dead subjects, for the purpose of illustrating those lectures? Have there been no intrigues going on to get a display in favour of Mr. Cooper, as exhibited in the surgical theatre in the University the other evening. Indeed was not the letter you alluded to in the Lancet written by one of these very intriguers for the purpose of getting up a *reason* for that

display. And was not this meeting a prelude to the appointment of Mr. Quain, and a blind to prejudice the students against Mr. Liston. Let the occurrences which have since transpired be an answer to these queries!

I am, Sir,
Your obedient servant,
O.

ST. GEORGE'S HOSPITAL.

THURSDAY, MARCH 3d, 1837.

Lithotomy—Successful Operation.

FIVE operations were performed this day in the presence of at least three hundred persons, many of whom were strangers. Amongst them were several students from the Middlesex and North London Hospitals; those from the latter institution being easily distinguished from the general mass by their time-pieces, which were in constant requisition.

Mr. HAWKINS removed in a few minutes a stone from a man aged about 50 The operation was well performed, and the section of the prostate gland was made with a double-edged knife. All present seemed highly pleased at the good success of the operator.

Much credit was due to the operator on this occasion for having courage again to come forward publicly to execute so important a task after the painful and distressing professional duties which had devolved upon him the preceding week.

The best operators who have ever appeared, and who have been candid enough to express their feelings, all have acknowledged the excitement and anxieties which they have suffered even under the most promising circumstances.

Mr. Hawkins's successful operation upon this occasion therefore deserves the more credit, from the unpropitious circumstances which attended his late effort.

Amputation—Union by the Second Intention.

A young man very emaciated and of a strumous habit, was next brought into the theatre, to have his leg removed above the knee joint. Sir BENJAMIN BRODIE performed the circular operation in the usual manner, but in consequence of pus being infiltrated amongst the muscles, the surface of the stump was dressed with dry lint, with the object of inducing union by the SECOND *intention*, a practice seldom pursued in our hospitals.

Necrosis—Trephining—Sequestrum not removed.

SIR BENJAMIN next trephined a necrosed tibia, but could not remove the sequestrum; this operation was tedious, but gave the patient apparently slight pain.

Removal of Encysted Tumours.

MR. KEATE then proceeded to remove three encysted tumours from the head of an old woman. Two of them were readily dislodged, but the third proved rather more refractory, in consequence of its having formed intimate adhesion to the surrounding parts, the effects of its being punctured upon one or two occasions.

Removal of the Toe Nail.

MR. HAWKINS lastly, removed the matrix of the nail of the great toe of a young woman who suffered from onychia. She came into the hospital to have the toe amputated, but Mr. H. very judiciously endeavoured to avoid so severe a remedy. Had this patient gone to the NORTH OF LONDON, her wishes would have been gratified in twenty-three seconds, the time allowed for that operation.

CASES IN OPERATIVE SURGERY;

WITH REMARKS.

By F. C. SKEY, Assistant Surgeon to St. Bartholomew's Hospital.

Removal of a portion of the Lower Jaw, by F.C. Skey, Esq. Assistant Surgeon to St. Bartholomew's Hospital, &c.

Mrs. M., aged 56, residing at Wimbledon, accompanied by Mr. Tapley, her medical attendant, consulted me in the latter end of September last, relative to a diseased condition of the lower jaw. On examination, I found the walls of the bone on the right side considerably separated by a morbid growth of a somewhat remarkable character, occupying the situation of the molar and bicuspid teeth. The extreme breadth to which those walls were separated was about an inch, which rendered her cheek prominent. Both

the inner and outer gum were more than usually vascular and tumid, and pressure on either occasioned pain. The teeth had been either removed or had come away spontaneously, at a date of many years antecedent to the first appearance of the disease. The alveoli were occupied by the diseased growth, which, apparently arising from their base, extended upwards to the level of the swollen gum, in the form of thread-like processes, terminating either in rounded or acuminated extremities; the whole possessing a sort of verrucous or cauliflower character. The disease extended beyond the original situation of the last molar tooth posteriorly, and reached, in the direction of the symphysis, the first bicuspid.

No other structure appeared to be involved, and the basis of the bone, as likewise the cervical glands, were to all appearance healthy.

The disease had existed about six months, and was attended by considerable darting pain, recurring at irregular intervals, which increased to a degree sufficient to occasion sleepless nights and generally impaired health. The slightest violence produced bleeding from the tumor, not always readily controlable; and this symptom was likewise on the increase at the date of her visit to me.

I had no doubt, on inquiry and examination of the necessity of its removal; and being unwilling to undertake a large operation without the concurrence of some professional person, I requested the opinion on the case of my friend Mr. Kiernan, who coincided with me in the necessity of an early operation, although, like myself, he was uncertain of the precise nature of the disease.

I performed the operation on the 29th of September last. I had previously seen several similar operations for the removal of the half of the lower jaw, but in each an incision was made, which appeared to me in some degree objectionable, viz. that of the cheek, commencing at the angle of the mouth, and extending outwards to the masseter muscle. This, for reasons I shall hereafter state, appeared to me unnecessary in this case. Having placed the patient in a convenient position, I made an incision from the symphysis to the angle of the jaw down to the bone, and divided the facial artery, which I immediately tied. Introducing the forefinger of my left hand into the mouth, I passed the knife from the wound upwards between the cheek and the gum, which were separated from each other to the extent of the external wound. Without waiting to tie many smaller vessels that were bleeding profusely, I pressed the tongue to the opposite side, and divided the mucous membrane which forms the floor of the mouth and the attachment of the mylo-hyoideus muscle to the bone, with a curved knife, the point of which was supported on my finger below, the inner surface of the bone being the guide for the incision. I had then the whole bone insulated. With a large pair of Liston's forceps, I divided the jaw near the symphysis, which split through without difficulty, and I again introduced them into the mouth, passing them backwards to the angle of the bone, which was in like manner easily divided, and I had the whole diseased growth removed. I then observed the sublingual gland, which was exposed, and as it appeared somewhat indurated, I removed it with one or two strokes of the knife. Many vessels were divided, and the hæmorrhage was considerable. I tied some arteries from the internal pterygoid and masseter muscles, and a branch of the submental. Wet lint was applied to the wound, and the patient was carried to bed.

The operation occupied 11 minutes. In an hour afterwards I removed the lint, and as all tendency to bleed had apparently ceased, I united the sides of the wound by means of two sutures, and requested that wet lint might be reapplied over them.

In six hours after the operation, in consequence of an attempt to speak, such considerable hæmorrhage recurred as to induce Mr. Tapley to divide the sutures and expose the wound. The bleeding ceased, and on the following day our patient was free from pain, and suffering merely from symptoms attendant on loss of blood. There arose no other drawback to her recovery, and she was convalescent in a month after the operation.

A section of the bone exhibited the full extent of the disease, which had apparently commenced in the alveoli, and extended in the direction upwards by the formation of the thread-like processes I have above alluded to.

It had likewise extended backwards towards the angle of the jaw, in the form of a whitish, somewhat schirrous-looking growth, which having imbedded itself in the substance of the bone, was gradually producing absorption of its more cancellated texture in this direction.

In reference to its malignant character or otherwise, great uncertainty existed; and it was exhibited to many men eminent in the profession.

Hitherto there has been no recurrence of the disease, and her health is perfectly reinstated.

I conceive the operation performed in this case to possess advantages over those which I had previously witnessed, both immediate and prospective. The operation is more simple. There can be no error as regards the first incision, either as to direction or depth. There is no danger of wounding the parotid duct, nor of making a second division of the facial artery, which is almost inevitable to the other operation. The bone is more immediately under the incision, and consequently more readily exposed, whereas, in the operation commencing by a transverse incision through the cheek, from the angle of the mouth, the diseased bone always lies more or less concealed, unless the incision indeed be very extensive.

Should secondary hæmorrhage occur, as in the above case, it is always preferable to have a direct rather than an oblique wound in the bottom; if not, the blood may accumulate.

If the external wound be immediately over the bleeding vessels, the trickling from the wound would admonish the attendants of the impending evil.

I am aware that much may depend on the extent of the disease, which may involve not only the base of the bone as far as the angle, but even the ramus as high as the condyle or coracoid process; and again, this extent may not be determinable till the operation is advanced. But notwithstanding the possibility of these difficulties, I should prefer the division along the basis, because, under all circumstances, a considerable part of the ramus, probably its inferior half, might be commanded from the lower wound; and should the disease be found to extend beyond the part exposed, I conceive it would be perfectly unobjectionable to make a division *across* the masseter, which would avoid the otherwise necessary injury to the portio dura nerve, effected by a vertical one.

The prospective advantage is that which arises from avoiding the deformity produced by the division of the face. In the case above detailed the deformity is so slight as to be almost imperceptible. There remains a slight hollowness of the cheek on that side, but nothing to indicate that so severe an operation had been performed.—*Gazette.*

Taliacotian Operation.

W. Detheridge, aged 52, called on me about the latter end of August last, with a letter from a medical friend, containing a request that I would examine his face, with a view to the performance of the Taliacotian operation.

The man stated that he had been at various times under the advice of experienced and eminent surgeons, but that all had declined his most urgent request that some attempt might be made to amend his unhappy condition of features attendant on the partial loss of his nose.

There was an earnestness in the man's appeal, almost imploring my assistance, accompanied by the assurance that he could not live to be the object of scorn and derision of all his acquaintance, that induced me to believe that there were some grounds for the suspicion that he was the subject of insanity. On investigating the circumstances attending the case, I ascertained that he had been endeavouring for twenty years to obtain the consent of some surgeon to undertake the operation, but all had prudently declined. He seemed to consider me in the light of a last hope, and employed all his eloquence, of which he possessed a more than ordinary share, to induce me to do that which the *élite* of the profession had declined, and in this he certainly succeeded, but not till I had convinced myself that his eccentricities were referable to too obvious causes to render my refusal inevitable on that score.

I considered the man to possess a large share of personal vanity, and to be exceedingly and morbidly sensitive to any defect which involved his personal appearance.

From the days of his boyhood he had suffered considerable annoyance from the discolouration of his nose on exposure to cold. He complained that he

could never keep it at the right tint of colour—warmth reddened and cold blanched it. With a view to meet the effects occasioned by the variation of temperature, he carried in his waistcoat pocket a quantity of chalk, with which he was accustomed to rub his nose as occasion required.

After a time, however, this expedient failed him, and he made a serious request to a medical gentleman to cut off his nose, and make him another of better materials. On the refusal of this gentleman to accede to his wish, he returned home, and with his own hand cut off the extremity of the offending organ, by an incision which commenced about one-eighth of an inch below the nasal bones, and passed down obliquely to the middle of the lateral cartilage. He then renewed his application to the surgeon, in the hope that all objections were removed.

On the assurance of the man's mental sanity, by two medical gentlemen of the highest professional respectability, who had known him for many years, and influenced by his own urgent entreaty, repeated in defiance of my assurances that the operation would be both a tedious and a painful one, and possibly at last unsuccessful, I consented to undertake it.

The operation was commenced by paring off the skin covering the remaining part of the nose, leaving well-defined margins all around. This the man bore with the most stoical indifference, as indeed he did every stage of the operation. He felt himself the hero of the day, with which something of the ridiculous was blended, as though he were paying the penalty due to his previous folly. The bleeding continued from the exposed surface for nearly three quarters of an hour, during which time the wound was sponged with cold water, and at length covered with lint, and the blood allowed to coagulate. When the bleeding had ceased, having previously marked with a pen and ink the exact form and dimensions of the skin to be removed from the right brow and which were in all dimensions more than sufficiently large to cover the surface exposed, I divided around, having a bridle directed towards the root of the nose, of about half an inch in breadth. From this flap, thus almost insulated, sundry arteries from the frontal bled considerably, and one among the largest poured out its blood, *per saltum*, from the point or tongue into which the flap was prolonged, and which was destined for the septum.

Before the flap could be finally adjusted on the nose, more than half an hour was occupied in arresting the bleeding from it, and I was compelled, though somewhat unwillingly, to place a ligature on a vessel that bled most pertinaciously from the side of the bridle. During this process the temperature of the flap became much reduced, and the surface of the nose was again covered with coagula. These being carefully removed, the flap was turned at the bridle, and laid down over the nose, which it was found to fit accurately.

Fine sutures were introduced down each side, at a distance from each other of about one-third of an inch; and, finally, I fixed up the tongue of the flap by two sutures passed across it, through its bleeding surface, and carried through the lower edge of the old septum: these two last, therefore, did not penetrate the skin.

The time occupied by the operation itself did not exceed twenty minutes, although the man was under the hands of his attendants for fully as long a period as I had anticipated. He had a slight attack of erysipelas in the following week, but notwithstanding this the integuments united perfectly. In one or two places, a groove was left between the old and new surfaces. These defects I have subsequently amended by removal, at the same time with a view of reducing the necessary bulk of the organ within moderate dimensions, and in this I think I have succeeded.

For six weeks after the operation, all the external sensations of the new organ were referred to the forehead, and to the exact spot which corresponded to the part touched. These, however, ceased the moment I made a division near the root of the nose, for the purpose above alluded to, and they have not returned. The man is proud of his new acquisition, and I do not regret being the agent of his possessing it. As the beauty of the nasal organ must ever continue a matter of taste among the community at large, I cannot speak of its relative merit in this instance, but a man has probably the best right to appreciate his own; and he, being a vain man, is pleased, so I am satisfied; and

perhaps I may venture to add, that general report speaks favourably of it.

The great difficulty, I imagine, in cases of this kind, arises from the dissimilar character of the integuments employed, to those for which they are substituted. It is impossible, by a single operation (at least the attempt would in all probability fail), to form a nose of natural dimensions from the forehead, because the integuments of the nose and face generally are thin, whereas those of the forehead are of more than ordinary thickness. Indeed, under any circumstances, I presume that considerable thickness would be required to insure circulation of the blood.

In the above case I have succeeded to some extent in reducing the portly character it at first possessed, by means of a pair of forceps constructed for the purpose of obtaining lateral pressure, the two blades of which are curved to fit the nose. It appears to me impossible to complete an operation for making an artificial nose at "one sitting;" the margins must be more or less abrupt, and the bulk large. In the above case I have reduced this by two or three subsequent operations, in each of which I have removed considerable portions of the new integument; and we are thus enabled to make a cleaner adjustment of the two edges, between which the former cicatrix should be included. Considering the motives for the operation, I do not imagine that any obstacle to these pruning incisions would arise on the part of the patient.

As so much depends on the exact apposition of the opposing surfaces, it appears to me that in this, as in all operations on the face, too much care cannot be bestowed in accomplishing this object. I am myself in the habit of applying, in addition to one or two large, several exceedingly small sutures, to the purpose of attaining the desired end; these latter, however, I generally remove within about thirty hours after the operation.—*Gazette.*

NORTH LONDON HOSPITAL.

ARTIFICIAL NOSE.

Samuel Snell, a shoemaker, aged sixty-two, was admitted the 11th of November. About thirty years since, small abscesses formed, broke, and discharged some thin matter upon the apex and alæ of the nose. These appeared two and three at a time, and at intervals of a few weeks. Abscesses also formed about the chin. About fifteen years since two similar swellings appeared, one on each side of the nose, near the apex; these broke, and "left a festered place," from which the present enlargements first sprang, a tumour began to form on each of those places, increased slowly in size, so that seven years ago they had become so large that they met above the bridge of the nose. Several fresh abscesses subsequently formed, the nature of which had the same disposition to this morbid growth. During the last fifteen months the tumours have increased rapidly in size. They are covered by the skin, and are not much discoloured. The sebaceous follicles are very large, and at times some curdy matter oozes out of them.

From the left side of the apex is suspended, by a footstalk, an enormous tumour, nearly as large as an orange, meeting another at the side; it hangs lower than the mouth. Upon the alæ are three other tumours of a similar nature, but with bases larger in proportion to their size. The fellow to the largest tumour above mentioned, is about the size of a hen's egg, attached by a broad base, and projecting forwards, so as to obstruct the vision. Below this, upon the alæ, are two smaller tumours, of more recent growth; the largest is about the size of a chesnut, and the other about the size of a hazelnut. The tumours are all separated by deep sulci. On turning them up many warty-looking substances are detected, about the alæ of the nose. They project downwards, to get to nearly a level with the mouth, and upwards and forwards to the same extent. The only inconveniences complained of are the obstruction of vision, so as to prevent him following his employment, the weight, and the disfigurement of the parts.

The patient having been seated in a chair, with his head supported, an incision was made over the apex of the nose and between the two large tumours, completely separating them. He then dissected off the large tumour of the left side, and subsequently the smaller ones; the inequalities were then smoothed down with a pair of fine

scissors. Some hæmorrhage took place, which was arrested by passing a needle through the vessel, and the application of a twisted suture. The operation on the right side of the nose was deferred, at the patient's request, until a future period. Water dressings to be applied.

Nov. 18. The remaining parts of the morbid growth were removed today; four small vessels required ligature. Hemorrhage came on about half an hour after the operation, but it was commanded by pressure.

Dec. 17. Surface nearly cicatrized; cicatrix assuming the appearance of the neighbouring skin; organ of the same form and size as before the commencement of the disease.—*Lancet.*

CASE OF

HYDROCEPHALUS EXTERNUS

TREATED BY

PUNCTURE OF THE HEAD.

By John Jeffrey, Esq. Surgeon, Cockburn's Path, near Dunbar.

On the 1st of August last, I was called to see a boy about three months old, whom I found suffering from a disordered state of the stomach and bowels. By the use of gentle laxatives, he seemed in eight days to have perfectly recovered. I was, however, requested to see the child again, about three weeks afterwards, when the mother told me that she thought the head was enlarged, because the cap which was formerly of sufficient size was now too small. I found the head a little enlarged, and thought that I could feel the fluctuation of a fluid under the anterior bregma; the eyes were turned downwards, as if the child was looking at the præcordia; pulse about the natural standard; tongue clean and moist; bowels regular, urine rather scanty, but in other respects the child seemed to be well, and free from pain. I gave small doses of calomel, repeated at short intervals, with a view to promote the absorption of the fluid, but though this treatment was persevered in for a considerable time, the head continued to enlarge. The integuments, particularly over the anterior bregma, became tense, and the bones began to separate. Under these circumstances, I urged the parents to allow me to puncture the integuments, in order that the fluid might escape, but to this they would not consent. I still continued my attendance, and several times spoke of the puncturing, but it was not till the 17th of November that they would agree to it. By this time the head had attained a considerable size; the bones were separated fully three-fourths of an inch, particularly along the course of the sagittal and coronal sutures; the circumference was 22 inches, and from the inferior part of the squamous plate of the right temporal bone, over the parietal protuberances, to the left, the measure was 12½ inches. On the 20th of the same month, I punctured, with the point of a lancet, the integuments and dura mater, at the anterior bregma, a little to the left side of the superior longitudinal sinus, and allowed about an ounce and a half of fluid to escape slowly. Having previously passed a bandage loosely around the head, I gradually tightened it as the fluid oozed out, in order to prevent fainting and further accumulation. The child stood the operation well, and in the course of a few days appeared to be considerably better; the eyes looked more natural, and he seemed to notice objects when placed before the eyes, which he did not appear capable of doing previously. I still continued to act gently upon the bowels, and about ten days afterwards repeated the operation. A small quantity of the fluid was allowed to escape every day. The child became more lively, and improved daily, until the morning of the 10th December, when the pupils became dilated, the respiration hurried, and the pulse quick and small; he got rapidly worse, the face and extremities became cold, the body was covered with a cold clammy perspiration, and he died at four o'clock in the afternoon. The parents would not permit a post-mortem examination.

Lancet.

CASE OF

FRACTURE OF THE FEMUR,

SUCCESSFULLY TREATED ON THE

SPLINTLESS METHOD.

By John Johnston Kelso, M.D.

The method of treating fractured bones without splints and bandages, had never been even hinted at, until Mr. Wardrop recommended it to the attention of surgeons: his observations and cases on this simple mode of treatment, being recorded in the first volume of the Lancet. Since that time, many intelligent surgeons have adopted this practice of

treating fractures, and it is extremely probable, that at no far distant period, the complicated machinery so long employed for the cure of fractured bones will be altogether abandoned.

Sarah Phillips, ætatis 4, whilst amusing herself with some companions, on the 10th of October, received a fall from a cart. Sometime afterwards I saw her, and found that she had got an oblique fracture of the femur, about the junction of the lower two-thirds of this bone with the upper third. There existed considerable tumefaction, with some pain about the seat of injury, the effect of violence inflicted by one of the relatives of the child, who, mistaking the real nature of the accident, had employed rather forcible traction of the limb. Having reduced the fracture, the extremity was laid on a pillow, stuffed with finely-carded tow, on which the eighteen-tailed bandage had been previously placed. The tails of the bandage having been lapped around the thigh, of a moderate tightness, there was then applied two thin slips of wood, of about ten inches long and two broad, as a set-off against splints, which are considered by the people as indispensable. These having been bedded with tow, so as to defend from their contact the immediate seat of injury, they were bound down at either end by tapes. Finally, the edges of the pillow were drawn a little up towards the sides of the extremity, by bands of calico, and so adjusted underneath by padding, as to bring the limb to that easy bent position in which the muscles are most relaxed.

Second day.—The limb is much swelled, hot, and very painful, more especially about the seat of fracture, accompanied with general restlessness, and impatience of confinement, on the part of the child. It is thus extremely difficult to preserve any thing like quietude in the injured part. *The superacetate of lead lotion is to be assiduously applied to the limb.*

Fifth day.—Circumstances, over which I had no controul, preventing me from visiting my little patient till to-day, when I with regret discovered that things had not gone on so favourably as my anticipations had led me to expect. It is true, the tumefaction, heat, and pain have, in great measure, subsided, but the fracture is displaced, the extremities of the bone are riding upon each other, and the limb quite crooked. This state of things arose from the foot having slided off the edge of the pillow during the tossings of the child, without being replaced. The fracture was again reduced, and the limb put up as before, charge being given, at the same time, to immediate attendants on the child, to preserve the limb as nearly as possible in the same position in which it was now left.

Sixteenth day—Since the date of the last report, the fracture has rapidly progressed towards complete re-union, in the absence of all local pain or uneasiness. The callus is now so firm as to allow the little patient to elevate its limb from the pillow on which it reposes, and even to throw it about playfully. But in order to guard against unnecessary or rash movements, until the callus becomes more firm, I thought it prudent to apply to the extremity a rather long piece of slender wood, with a circular roller, as a precautionary measure against any untoward accident which, in some of the child's playful moods, might otherwise possibly befall it.—*Lancet.*

ST. THOMAS'S HOSPITAL.

Lithotomy. — No Stone extracted. — Gorget passed between the Rectum and Bladder. — Death. — Bladder unopened. — Large calculus detected.

An operation for lithotomy was performed last week by Mr. Travers, at St. Thomas's Hospital, under circumstances equally painful and distressing to the operator as those which happened at St. George's Hospital a few days before. In Mr. Hawkins's patient, this dangerous operation was performed unnecessarily, no stone having been found in the bladder; but in Mr. Traver's patient, the operator was placed in a position still more humiliating, no stone being removed, whilst a large calculus was found in the bladder after death.

A child about two years of age was placed on the operating table, and the existence of a stone being distinctly ascertained, not only by Mr. Travers himself, but also by Mr. Tyrrell and Mr. Green, the operation was immediately proceeded on.

After having cut into the urethra, and the beak of the gorget having been placed in the groove of the staff, Mr. Travers supposed that he had pushed

forwards the gorget into the bladder, after which, every possible search for the stone was made for nearly an hour, but without success!

After the patient's death, it was found that the gorget, in place of having been introduced into the bladder, had been thrust into the loose cellular tissue between that viscus and the rectum, in consequence of which, the operator had not been able to extract the stone.

BOOKS FOR REVIEW.

The Continental and British Medical Review, or Monthly Therapeutical Journal. Edited by A.M. Bureaud Reofrey, M.D. &c. &c.—No. 1. March, Causton and Balliere.

A very erudite periodical tending, to make the continental and British Medical profession well acquainted with each other; we shall notice it fully in our next.

A Translation of the Pharmacopœia of the Royal College of Physicians of London, 1836, with notes and illustrations. By Richard Phillips, F.R.S.L. and E. &c. by permission, 8vo. pp. 392. London, 1857, Highley.

This work is far superior to any other translation, and ought to be in the possession of every medical practitioner.

Medical Essays. By J. Hungerford Sealy, M.D. Phthisis Curable and Incurable, &c. &c. 12mo. pp. 82. London, 1837. Sherwood and Co.

TO CORRESPONDENTS.

Chronometer. We believe that his plan will be adopted at the North London Operating Theatre. Although it is not the usual practice to measure the precise time required for any surgical operation, yet the great interest which the *Lion* has created on this point has determined the governors to erect a *time-piece* in the theatre, and which is to be placed under the immediate direction and superintendance of Mr. Richard Quain and Dr. Anthony Todd Thomson. The errors which have been so frequently committed, render this measure imperative for the benefit of science. The last lithotomy case, which from the reporter's inaccuracy was stated to be "less than a minute," we are credibly informed took one minute and *four* seconds! counting precisely from the moment the operator withdrew his finger from the rectum to the passage of the stone through the external incision. Another operation, which the reporter stated to have taken two minutes and sixteen seconds, actually took only one minute and *forty-seven seconds.*

Quidnunc. We believe that two years purchase is expected for the periodical. If the names of the editors appear, the agreement ought to be at once closed.

Tattler ought to be guarded in the use he has endeavoured to make of mere report. The *honourable* member's illness was merely an attack of *laryngitis* in its most simple form, so that he could not audibly address a public assembly. He is again vigilant at his post.

King's College Student. We cannot state why Mr. Partridge interferes in the midwifery affair! His versatility is duly appreciated both in the Strand and at Golden-cross.

Inquirer. We do not suppose that Mr. Guthrie will permit a trial of the "new discovered remedies for the painful affections of the eye," at the ophthalmic infirmary, until a satisfactory series of experiments have been performed on the efficacy of St. John Long's lotion and Mr. Hutchinson's cancer ointment. The eye snuff has stood the test, as appears by the certificate of Mr. G.

ERRATA.

No. 263.—Page 720, column 1, line 21 from bottom, for "*arms,*" read "*anus.*"

No. 264.—Page 750, column 2, line 22 from bottom, for "parenchymatous *stomach,*" read "parenchymatous *stomachs*" Line 20 from bottom, for "pencils *from* rays," read "pencils *of* rays." Page 751, column 1, line 25, for "in the *front,*" read "in the *trout.*" Page 753, column 1, line 16 from bottom, for "*pullacious,*" read "*pultaceous.*"

All communications and books for review to be forwarded, carriage paid, to Dr. Ryan, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

THE

London Medical and Surgical Journal.

No. XXXIX. SATURDAY, MARCH 18. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XIV.

Sensation.

Orbit of the Frog, the Walrus, the Ape, and Man—Eyes of Insects—Electrical Experiments—Contraction of the Iris—Commissure of the Optic Nerves—Partial or Complete Decussation—Production of Light, Heat, Electricity, and Sound—Rays of Light not Luminous—Visual Angle—Perspective—Large and Small Eyes—Light of the Sun and Moon—Reflected Light—Magnifying Glasses, Convex and Concave Mirrors—Spherical Aberration—Lachrymal Gland in Reptiles—Use of the Meibomian Glands—Divers—Short Sighted Persons—Presbyops and Myops—Invention of Spectacles—The Iris not sensible to Light—Amaurosis—Sir Charles Bell on the Membrana Pupillaris—The Chrystalline Lens—Its Refracting Power—Its Mean Density—Inversion of the Image on the Retina—Seeing without an Image—Manner in which the Mind takes cognizance of the Image—Vision in the Choroid Coat—Adaptation of the Eye to different Distances—Unproved and Unnecessary—Pigmentum Nigrum—Does not defend the Retina, but the Choroid—Immediate Seat of Vision—Foramen of Soemmering—Insensible Spot of the Retina—Suffocation of the Rays of Light—Entrance of the Rays of Light—Experiments with Wafers and Cards—Retention of Images by the Retina—Accidental, Opposite, or Complementary Colours—Confounding of Colours—Anecdotes of Dugald Stewart, Dalton, a Tailor, and a Draper—Cause of Single and Double Vision—Facility and Certainty of Aim in Shooting—Sense of Hearing—List of the Cerebral Nerves—Effects of dividing the Fifth Pair—Animals which Hear and See with the whole Body—Auditory Apparatus in the Crab, Cuttlefish, Serpents, Fishes, Birds, Mammalia, and Man—Vibrations of the Air not Sonorous—Sound of a Bell and of a Flute—Difference between Morning and Evening Concerts.

In the frog there is no floor to the orbit. The eyes project into the palate; and if you open the mouth, you will see them resting on the mucous membrane of the mouth. In the walrus, the *roof* of the orbit is imperfect above; and in all animals, except man and the ape, the orbit is very imperfect. The eyes of insects are immoveable; being fixed at the end of bony cylinders. Still they are furnished with oblique muscles; so that in animals, in which they do exist, they cannot be for the purpose of moving the eyes inward. If we put a disc of silver, and another of tin, into the mouth, when they are made to touch, a flash of lighting is perceived; and the iris contracts, not from muscularity, but from sympathy; for the iris would not contract if the nerve were amaurotic.

From the pulpy state of the optic nerves, it is difficult to say whether they decussate or not in their commissure. The following authors say they do not:—Galen, Versalius, Sautorini, Zin, Vicq d'Azyr, Morgagni, Petit, Haller, and Monro. Cheselden and Soemmering

say, the decussation is complete. The following think it is partial:—Michaelis, Ackerman, Wollaston, Cuvier, and Serres.

I think the production of light is more analogous to that of heat and electricity, than sound; and thus *seeing* is more like *smelling* (where there is an actual displacement of particles) than *hearing*. Animals give light by secreting a substance which has probably less capacity for light than the body itself; and therefore gives it out. Light would travel from one pole of the earth to the other (a distance of eight thousand miles) in the twentieth part of a second. The rays of light are not in themselves luminous; for there can be no light without a sensorium to take cognizance of the sensation, which we identify with light. It is said, that a star is invisible to the eye, if the visual angle is less than half a minute. Animals with small eyes, cannot see with so small a visual angle as those which have large eyes; for there is not room in the eye for the rays to expand. Perspective depends on the visual angle. The light of the moon is said to be three hundred thousand times less than that of the sun, which it reflects. We generally see by reflected light, as when reading a book with our back to the candle; in which circumstances the book is illuminated by the light reflected from the walls of the room, &c.

When we see an object by converging rays, it is magnified; for we refer it to the distal extremities of the rays of light which proceed from the object; and if these rays *converge* to our eyes, they must *diverge* to the object. In a *convex* mirror, we see the object *behind* it, but smaller than it is. In a *concave* mirror, we see the object *before* it, and smaller. In both, the image is somewhat distorted by spherical aberration, from the different distance of the radiating points from the reflecting surface. In a convex mirror, the nose appears proportionably large. By making the mirror concave in one direction only, the face is much elongated; and by varying the surface in different ways, the most hideous representation of beautiful objects may be given.

We never *see* a black object. We are only *conscious of its presence* by contrast with the surrounding objects. Reptiles have a very large lachrymal gland, in order to keep the eyes moist on land, as they are in the water. It is generally said, that the object of the Meibomian glands, is to prevent adhesion of the eyelids during sleep; but none of the other apertures of the body are found to adhere, although they are not furnished with such glands. Their chief design, probably, is to keep off insects from the ball of the eye, by entangling them. Another purpose is to keep the tears within the eyelids. Some divers use very convex lenses. Short-sighted persons go peering about with the eyes half-closed, so as to admit only a few pencils of rays. This lessens the divergence of the rays on entering the eye; and thus renders them less perplexing. It also diminishes the distance between the retina and the cornea.

Far-sighted persons *(presbyops)* can see *distant* objects better than those which are nearer; and a convex glass makes the rays from a near object, take the same direction as those from a distant one. It is just the contrary with near-sighted persons *(myops)*. Spectacles were not invented till A.D. 1300.

The sphere of vision in man, is about a hundred and ten degrees; but the *jalappa* can see almost in all directions. Properly speaking, an insect has as many eyes as fascets. The direction of the rays of light is but little altered in passing through the aqueous humour; as the specific gravity of that humour, is very nearly the same as that of the cornea. It is wrong to say the iris is sensible to light. It only contracts by sympathy with another part (the retina), in which an irritation is produced by the light.

If the iris were sensible to light, it would contract when the retina is amaurotic; which it does not. When we examine an eye affected with disease, we must cover up the sound one; or the iris of the former may contract from sympathy with that of the latter, and may thus give rise to a false impression, that it contracts from the sensibility to light of the diseased eye itself. Charles Bell thinks the design of the *membrana pupillaris*, is to keep the iris expanded; for, as there is no light in the uterus, the iris, if left to itself, would remain contracted; and would thus not receive vessels enough for its nourishment when it came to be

expanded after birth. The large size of the pupil in females and children, is probably from their having less sensibility than men; and the pupil is enlarged in venery, and in all debilitating diseases. The *sphere* of vision is not diminished by the contraction of the pupil; for rays coming from all parts of objects enter the eye; but as *fewer* such rays are admitted, the *intensity* of vision is lessened.

According to Brewster, the refracting power of the crystalline lens, is greater than that of the vitreous humour; being as a thousand three hundred and thirty-*nine*, to a thousand three hundred and thirty-*four*; but its mean density is *less*: being as a thousand and *fourteen*, to a thousand and *sixteen*. The rays of light passing through the cornea, fall more obliquely on the centre of the lens, which is nearer the cornea than its edges are; and therefore it is necessary it should have a greater refracting power. D'Alembert says that the difference is so slight, as to be almost inappreciable; and this is proved by the extraction of the lens; the inconveniences of which are, that the image is larger and less distinct; and these inconveniences are remedied by using a very convex glass; though we cannot so make the glass as to correct spherical aberration. Although the crystalline lens, therefore, is so made, it cannot be to any great extent. There is a series of convergencies of the rays, first from the cornea; secondly from the lens; and thirdly in the vitreous humour.

The doctrine which Gall maintains, is probably correct; that the mere position of the object on the retina, has no more to do with seeing it *inverted* or not, than *hearing* has to do with the particular part of the auditory apparatus, on which *sound* falls. There is as great a distance between the image and the mind, as between the mind and the object itself. The cuttlefish sees, though the object is not imaged on the retina: for the *pigmentum nigrum* is *before* the retina. The mind takes cognizance, not of the whole image at once, but of its individual points, and connects them by memory. The seat of vision was placed by the ancients in the crystalline lens. Some place it in the choroid coat.

It has never been proved that the eye-ball is capable of adaptation to different distances; or that it is necessary; though many different explanations are given of it. If it had such a power, we could see an object equally well at any distance within certain limits; whereas the maximum distinctness is only at one point. A bullock's eye, after death, gives the view of a perfect landscape; which would not have been the case, if the animal had died with the eye adapted to a certain distance. The *pigmentum nigrum* is said to defend the retina from too great a light; but how can it do so, since it is placed *behind* the retina? It may defend the *choroid*, which is probably the immediate seat of vision; for the latter is most vivid at the *foramen* of Soemmering, where there is no retina.

The insensible spot of the retina, is the part of the retina where the optic nerve enters. From the position of the globe of the eye, out of the axis of the socket, the rays which enter both eyes, can never be suffocated at once; for they cannot fall on the insensible spot in both eyes. There is, perhaps, a fallacy with respect to this insensible spot; for if it were true, those who are blind with one eye, should always have a black spot on the field of vision. The entrance of the optic nerve at one side was probably designed to remove it out of the sphere of distinct vision.

We have said that the choroid coat is probably the seat of vision. Correctly speaking, however, the choroid is not the seat of *vision* itself, but of the irritation on which vision depends; and this irritation is conveyed to the sensorium by the optic nerve. The retina retains the impression of an image, for some time after it has been presented. Thus if a chariot be painted on one side of a card, and on the other side a driver, if we turn the card rapidly, the driver will be seen climbing the chariot.

If we put two wafers on a wall, at a certain distance from each other, and then recede from the wall to about five times that distance, keeping the eye fixed on one of the wafers, the other wafer will be lost; because the rays which proceed from it, impinge on the insensible spot of the retina.

If we put a *red* wafer on *white* paper, and fix the eye on it for some time, on moving the eye, a *green* spot will be seen on other parts of the paper.

This is owing to *green* being the *accidental*, or *opposite*, or *complimentary* colour (as it is called) to *red*. The explanation of it is, that by a prolonged gaze at the red object, the sensibility of the retina to that colour becomes exhausted; and when the eye is turned to the *white* paper, the retina takes cognizance of all the rays which enter into the composition of *white*, except *red*; and in this way a *blueish green* colour is produced. If we look at a *black* wafer on *white* paper, the eye is refreshed; and on turning it away, we shall see a portion *whiter* than the rest; so that the accidental colour of *black*, is *white*. If we look at a *white* spot on a *black* ground, and then turn the eye away, nothing but black will be seen, the retina being insensible to all colours.

The following is a list of complementary colours:—1. Orange; blue. 2. Yellow; indigo. 3. Green; violet, with a little red. 4. Blue; orange or red. 5. Indigo; orange-yellow. 6. Violet; yellow-green.

Many persons are insensible to some colours; being unable to take cognizance of one end of the spectrum. Dugald Stewart could not distinguish *red* crab apples from the *green* leaves of the tree on which they grew, except from their size. The celebrated Dalton, of Manchester, cannot distinguish *pink* from *blue*. A tailor used to patch *blue* with *red*; and an ironmonger, who is now living in Edinburgh, and who was originally bound to a draper, insisted on a gentleman's taking *scarlet* strings to match *drab* trousers.

Single vision is from the convergence of both eyes to the same point. It is a *voluntary* act, not being *natural* to man; for in reverie, the eyes do *not* converge. If we hold up the finger between the eyes and any object, and then look at the finger, we shall see *two objects*; and if we look at the object, we shall see *two fingers*. We can never see *two* objects by *one* act of vision; for no two objects are exactly together, so as to make the same convergence of the eyes effectual for both. We cannot see a landscape collectively; but we see its different points successively, and connect them by an exercise of memory. When we look at near and at distant objects at the same time, there is a greater difficulty in adapting both eyes to them; and therefore we often shut one of them. In shooting, it is more *difficult* to aim with both eyes open; but the aim is more *certain*.

III. *Sense of Hearing*. The power of hearing is lost, if the fifth pair of nerves be divided. The division of these nerves (the trigeminal) has the same effect on the other special senses; for *general* sensibility (which is imparted by the fifth pair) must precede *specific* sensibility; which is conveyed by the special nerves of the senses,—the *olfactory*, the *optic*, the *auditory*, &c.* In crabs and fishes, the fifth pair stands in the place of the proper auditory nerve. Some of the lower animals appear to hear with all the body; as some likewise appear to *see* with the whole body; both being modifications of touch, like the other senses. The *cancer* and *sæpia* are the only *invertebralia* which appear to have an auditory apparatus. In them you have an *auditory nerve* and a *vestibule*. In fishes, the *semicircular canals* are added; the *tympanum*, the *Eustachian tube*, and the *bones*. Birds have, in addition, a *cochlea* and an *external auditory passage*: and the *mammalia* have a *pinna*. The *stapes*, in the ear of serpents, is called *columella*; and is the only auditory bone they have. The muscles of the ear seem to be involuntary: and are to the ear, what the iris is to the eye. The pinna is very large in the owl.

The stimulus to the irritation, the perception of which constitutes hearing,

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* As constant reference is made, in this part of the course, to the different cerebral nerves, and often by different names, it may be well (for the sake of facilitating reference) to introduce a list of them here:—

I. First Pair. *Olfactory*.
II. Second Pair. *Optic*.
III. Third Pair. *Motores Oculorum*.
IV. Fourth Pair. *Pathetici*.
V. Fifth Pair. *Trigemini*. 1. Opthalmic.
VI. ——————— 2. Superior Maxillary.
VII. ——————— 3. Inferior Maxillary.
VIII. Sixth Pair. *Abducentes*.
IX. Seventh Pair. 1. *Portio Mollis*. (Auditory.)
X. ——————— 2. *Portio Dura*. (Facial.)
XI. Eighth Pair. 1. *Glosso-Phlyngealar*.
XII. ——————— 2. *Pneumo-Gastric*. (Par Vagum.)
XIII. ——————— 3. *Spinal Accessory*.
XIV. Ninth Pair. *Lingual* (Hypoglossal.)

is generally produced by vibrations of the *air*, in *terrestrial* animals; and in *aquatic* animals, by vibrations of the *water*. In *burrowing* animals, it is perhaps produced by vibrations of *solids*. Tremors in the air are not *sonorous*. They only excite a *sensation* which we denominate *sound*. There can be no sound without an ear. When a bell is struck, it assumes an oval shape; and then, from reaction of its particles, it forms an oval in another direction, at right angles to the former. In a flute, the sound is produced by vibrations of the air itself; a new column of air being added to that which was already contained in the instrument. The shorter the column, the sharper the sound. When we respire hydrogen, which is a worse conductor of sound than atmospheric air, its effect on the voice is very peculiar. Owing to the different density of the air, at different times, *morning* concerts are not so good as *evening* ones; nor are concerts in *summer* so good as those in *winter*.

OBSERVATIONS ON CRIMINAL ABORTION.

MURDER OF THE FŒTUS IN UTERO.

Criminal abortion has been long and justly considered a heinous crime in all civilized countries; but the punishments awarded against those who perpetrated it varied according to the physiological conclusions drawn as to the age at which the embryo became a living being. The most extravagant opinions were entertained on this subject. It was universally believed by the ancient cultivators of medicine, that the embryo was not endowed with life for some time after conception. Then arose the question, at what age was life infused into it? The answer was most unsatisfactory. Hippocrates was of opinion that the male embryo became animated in thirty days after conception, and the female in forty-two. Galen considered the animation of the embryo took place at the fortieth day. Later authors fixed different ages, but all agreed that there were animate and inanimate fœtuses. The canon law of the Church of Rome, and the statute of England, even at the present period, admits this untenable distinction (see 9 Geo. IV. c. 31), and according to the common law of this country, as laid down by Blackstone, "life does not commence before the infant is able to stir in the mother's womb." The law of Scotland is still more erroneous, for it declares, according to the Stoics, that the fœtus in utero is merely *pars viscerum matris*.*

The general opinion now entertained by those unacquainted with physiology is, that the fœtus is not alive until after quickening, that is, not until it stirs in the mother's womb; and therefore that it is no crime, according to popular inference, to cause abortion before quickening.

Our statute law makes it felony, and condemns the guilty to transportation for seven, or fourteen years; and to suffer death if the fœtus has quickened (9 Geo. IV. *olim cit*). The absurdity of animate and inanimate fœtuses is easily proved.

It is manifest to common sense, that the embryo, previous to quickening, which generally occurs about the fourth month and a half after conception (sometimes earlier and sometimes later, and in some cases is not felt at all), must be either dead or alive. That it is not dead is clear, as it does not undergo decomposition or putrefaction, which would be inevitable if the embryo was deprived of the vital principle. The dead embryo would be a foreign body, and the uterus would speedily expel it. Moreover, when women die, or are suddenly deprived of life during the early months of pregnancy, we find, on dissection, unimpeachable evidence that a vital process existed between the fœtus and the womb. Again, we observe the fœtus from the second to the fourth month perfect in all its parts, and are we to conclude that this could be the case, were it inanimate before this age? Mauriceau and others declare that they saw fœtuses of ten weeks alive, which moved the arms and legs, and opened their mouths. In fact, no physiologist can doubt this statement. On no other principle, than the vitality of the embryo, at the earliest age, is it possible to explain the physical changes that take place in the ovum in the uterus from the instant of conception to the time of quickening.

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* The Stoics held that the soul was not united to the body of the fœtus before the act of respiration; and that the latter was inanimate during the whole period of pregnancy.—*Plutarch's Morals.*

Dr. Beck has well expressed the opinion of all physiologists, "the fact is certain, that *the fœtus enjoys life long before the sensation of quickening is felt by the mother.*" Indeed, no other doctrine appears to be consonant with reason or physiology, but that which admits the embryo to possess vitality from the very moment of conception. "If physiology and reason," continues this excellent jurist, "justify the position just laid down, we must consider those laws which treat with less severity the crime of producing abortion, at an early period of gestation, as immoral and unjust. They tempt the perpetration of the same crime at one time, which at another they punish with death."* This incontrovertible conclusion was previously drawn by the revered Dr. Percival: "To extinguish," said he, "the first spark of life, is a crime of the same nature, both against our Maker and society, as to destroy an infant, a child, or a man: these regular and successive changes of existence being the ordinances of God, subject alone to his divine will, and appointed by sovereign wisdom and goodness, as the exclusive means of preserving the race, and multiplying the enjoyments of mankind."† I have made these quotations as some late medico-legal writers have maintained the opposite conclusion: Dr. Gordon Smith, Dr. Good, Dr. Paris, and Dr. Copeland consider that a fœtus born before the completion of the seventh month, has a slender chance of surviving, and they argue that no woman ought to be convicted of murder of an infant born within that period. Let us suppose that this doctrine was generally received, and that fœticide before the seventh month was tolerated by the laws of civilized countries, the result would be a considerable diminution and a final extinction of the human race. Nevertheless these authors admit, for they could not deny it, that infants born before the seventh month have survived and grown to maturity. Perhaps they had accommodated the foregoing statement to the casuistical axiom — *non homo est, qui non futurus est,* which would be a very agreeable one to prolicides. In recording these remarks, I neither mean or intend disrespect; but I contend that no human being is justified in causing abortion before the seventh month, because no one can, in the present state of science, positively declare, that a fœtus before that time cannot arrive at maturity, or at the adult age. I therefore completely agree with Percival, Beck, and almost the whole profession, that embryocide and fœticide ought to be equally punished with death.

It is acknowledged by all obstetric writers, that it is extremely difficult to dislodge the ovum in the first months of pregnancy by criminal means, and also that a preponderating majority of pregnant women bring forth living infants, notwithstanding the vast number of causes of abortion.

Our law is also absurd in ordering a jury of matrons to decide, when a woman pleads pregnancy in stay of execution, whether she is quick with child or not, or when a widow pleads pregnancy at the death of her husband, with a view of her offspring becoming entitled to property in preference to the next heir of deceased. These questions can only be decided by physicians and surgeons: and much to the credit of our judges they invariably exert their discretion, and refer such inquiries to the decision of educated and respectable medical practitioners.

It is enacted by the 9th Geo. IV. c. 31, that "using any poison or noxious thing, or any instrument to procure the miscarriage of any woman quick with child, or consulting or advising therein, is felony, punishable with death; and the same offence as to a woman not quick with child, or proved to be such, is felony, punishable by transportation for not exceeding fourteen, and not less than seven years; or imprisonment, with or without hard labour, not exceeding three years; and public whipping once, twice, or thrice, may be added by the judge."

Every medical practitioner ought to be aware of this law, for it often happens that large bribes are offered to medical apprentices and assistants, and even consulting physicians and surgeons, if they would give some abortive medicine. The woman may threaten to commit suicide unless her proposal be entertained; but, in such cases, the medical adviser ought to appeal to her sensibility and humanity, and expatiate on the horrible crime of murder, and especially if committed by the softer

* Elements of Medical Jurisprudence.
† Percival's Works, Vol. 2.

sex, on herself or her innocent offspring. Moreover, she ought to be informed that there is no means capable of procuring abortion which does not endanger the life of the woman as well as that of the infant, and that the proposal she makes to an enlightened individual, is to murder two individuals. I have never known a forcible appeal of this kind that did not succeed, and destroy the idea of suicide and fœticide. The unfortunate applicant ought to be advised to change her residence, or go into the country in the last months of pregnancy, for the purpose of escaping detection. It is also right to inform her, that no respectable member of the medical profession would listen for a moment to such a shocking proposal as to commit murder for paltry lucre, or debase his noble calling by doing evil instead of good.

While writing this article, I have been consulted in two cases such as I have been describing. In one of these, the lady threatened to drown herself at Westminster-bridge, unless her proposal was complied with; and the other, a young widow, would lose a rich husband, who was most importunate to marry her. I found she was in the sixth month of pregnancy. In both cases an appeal to feminine feelings on the atrocity of the crime of murder, the heavy and just penalties of the law against all who advised or attempted to procure abortion, and a declaration that no medicine or operation could cause it without endangering, and in general destroying the mother, completely succeeded in tranquillizing the minds of both applicants, and banishing all ideas of the contemplated crime. In many applications of this kind, the women supposed that the fœtus was inanimate until after quickening; which is a popular and legal opinion in most countries.

The practice of causing abortion is too often employed by unmarried women, who, through imprudence or misfortune, have become pregnant, for the purpose of avoiding the disgrace of having an illegitimate infant, or when deserted by their seducers, or when proposals of marriage are made to them; and sometimes it is even employed by married women who wish to have a small family, or to prevent a recurrence of peculiarly severe labour pains, which they had suffered on previous parturitions. It is, however, to be recollected, that abortion is not always associated with disgrace or crime; as it may arise from an immense number of moral and physical causes, which are perfectly natural, independent of, and beyond the control of the woman. The medical witness should therefore be extremely cautious in duly estimating the ordinary causes of involuntary abortion in all cases of illegitimate pregnancy; and more especially as popular prejudice and ignorance call upon him to confirm their unjust, and too often their false decisions.

The medical witness ought, in all criminal proceedings concerning alleged abortion, most carefully bear in mind the immense number of moral and physical causes capable of producing involuntary abortion. This being done, he should next reflect on the various criminal means which are employed to destroy the fœtus in utero.

All means used to procure criminal abortion excite the uterus to contract prematurely, and to expel its contents. These may be divided into general and local.

The general means are repeated venesection, drastic purgatives, abortives, emennagogues, diuretics, emetics, &c. These remedies act, first upon the constitution of the mother, then on the uterus, in consequence of the sympathy which exists between it and every other part of the body. Hence it has been generally remarked by obstetricians and medical jurists, that all means will fail to produce the desired effect (unless in those predisposed to abortion), unless exhibited to such an extent as to endanger or destroy the life of the mother. It has been concluded a general proposition, that there is perhaps no medicine or abortive, which invariably produces abortion, and nothing but abortion, without endangering the lives of the mother and offspring. There are, however, two exceptions, which I purposely omit to mention even in this article. "Every woman," says Bartley, "who attempts to promote abortion, does it at the hazard of her life." "There is no drug," says Male, "which will produce miscarriage in women who are not predisposed to it, without acting violently upon their system, and probably endangering their lives." "It has frequently occurred," says Gordon Smith, "that the unhappy mother has herself been the sacrifice, while the object intended

has not been accomplished." Fodere gives an example of this last position. Hence the axiom, "*sæpe, suos utero quæ necat, ipsa perit.*" Ample attestation of the validity of this conclusion is afforded by reference to the records of cases in the works on legal medicine; and numerous examples will appear in an account of the usual means employed to induce abortion. I shall therefore enumerate the principal ones.

Venesection.—It was stated by Hippocrates, that venesection was a means of destroying the fœtus "Mulier uterum ferens abortit secta vena, eoque magis, si sit fœtus grandior." This is a popular opinion, even at present; though an erroneous one, as venesection is one of the best means of preventing abortion. In further proof it may be stated, on the authority of Mauriceau, that two pregnant women were delivered at the full time, though one of them had been bled forty-eight, and the other ninety times, for inflammation of the lungs. This is the opinion of Mauriceau, De la Motte, Boer, Desormeaux, Velpeau, Duges, Hamilton, Burns, myself, and numerous other authors. Dr. Rush, of Philadelphia, bled women in yellow fever, in 1793, eleven, thirteen, and sixteen times, and all bore living infants.*

Considering the circulation of the blood continuous, as the illustrious Harvey first demonstrated, it follows that the effects of opening a vein in the arm or foot, or any part of the body, will be the same; and, therefore, it is an error to suppose that pedal venesection can procure abortion more readily than brochial. Nevertheless, opening a vein in the foot has been practised to procure abortion, and uneducated medical practitioners have performed the operation with this base intent in all countries. However erroneous the opinions of such persons may be, the malicious intent is obvious; and the law of this country would hold them guilty. It is possible, however, that one or many bleedings in a debilitated woman might destroy the fœtus in utero; and in all cases in which copious depletion is employed and frequently repeated, the medical witness ought to ascertain, when practicable or possible, the intent of the person, and the nature of the disease which required this practice.

I have heard of a singular case of a woman in the upper ranks of life, who was six times pregnant by incestuous connexions. She caused abortion five times in the following manner:—She was accustomed to apply to a country quack to bleed her in the foot for obstructed menstruation. When this was accomplished, she took off the bandage and allowed herself to bleed until she nearly fainted. This plan, however, failed on the last occasion.

Drastic Purgatives and Emetics.—These may induce abortion in irritable, feeble, or delicate women. When urged too far, or used too freely, the death of the mother is much more likely than that of her infant. The sympathy between the rectum and uterus is intimate; and violent irritation in one organ will inevitably affect the other, and derange its function. It is a remarkable fact, long known to practical obstetricians, that spontaneous vomiting or diarrhœa during pregnancy, never cause abortion. I have been medical officer of two public charities, in which two of my colleagues, who were no obstetricians, were in the habit of prescribing for all persons a form of pill which they designated pil. opt. composed of the aloetic pill and calomel; which produced so many abortions, that I felt it my duty to remonstrate with them, and finally to inform them, that if they persisted in ordering this remedy for pregnant women, I should appeal to the managing committee of the institutions, and if they declined to interfere, to the civil authorities. The abuse was discontinued.

Diuretics.—This class of medicines may induce abortion in nervous hysterical women, but such result is very rare. Such remedies are employed in ascites and anasarca during pregnancy, without producing abortion. Fodere relates a remarkable case in confirmation of this opinion. A woman took, for twenty successive days, one hundred drops of distilled oil of juniper, without any injury, and was delivered of a living infant at the ordinary term of pregnancy.* Mr. Lucas, of the Leeds infirmary, relates the case of a woman who took one drachm of powdered cantharides with a view of inducing abortion, which did not, however, happen, and in five months afterwards, she was delivered of a healthful infant.†

* Medical Observ. and Inq.—Vol. 3.

* Op. cit. V. 4.

† Mem. of the Med. Society of Lond. V. 2.

Fodere relates another remarkable instance of this kind. He saw a cook in 1791, who took half an ounce of powdered cantharides, and an ounce of powdered sulphate of magnesia, for the purpose of causing abortion. She was seized in a few hours afterwards with excruciating pains in the abdomen, and brought forth a living infant. She died, however, the following night.*

The secale cornutum was so much used in Germany in the last century as an abortive, that it's employment was prohibited under severe penalties. It is generally supposed that this medicine is not an abortive, but I am certain the contrary is the fact. Dr. F. Ramsbotham has also attested this conclusion in his lectures on midwifery.† It is also a common opinion that this medicine may destroy the fœtus during parturition; but I am firmly convinced that it produces no such effect when used judiciously; and I can add that I never knew an instance in which the fœtus was dead, in which it had not been used in too large doses, or when there was rigidity of the external genitals, deformity of the pelvis, or preternatural presentation of the infant.

(To be continued).

MISCELLANEOUS

MEDICAL BOTANY.

COMMUNICATED WITH THE VIEW OF CALLING THE ATTENTION OF NATURALISTS TO THE MEDICINAL PROPERTIES OF PLANTS.

By Dr. Castle.

RHODIOLA OR COMMON ROSE-ROOT.

This plant is admitted into some of the continental pharmacopœias on account of its astringent and fragrant root. It is the *Sedum Rhodiola* of De Condelle (Rhodiola rosea, *Lin.*) belonging to *Decandria Pentagynia* of Linnæus, and to De Condelle's natural order *Crassulaceæ*. To point out its native place would be a matter of difficulty, for it is not only to be found in the mountains of the north of England, Scotland, and Wales, but it is equally an inhabitant of the mountains of mid-Europe, the Arctic shores and islands of North America, of Newfoundland and Labrador, and many other parts. It is a little perennial, usually from six to eight inches high; stems simple; leaves flat, oblong, glabrous, glaucous, serrated at the apex; flowers yellow, corymbose, consisting of a five-parted calyx, and generally of four petals. The root (*radix rhodiolæ*) is branched, white, fleshy, and tuberculous, particularly at its upper part. It has a very agreeable rose-like odour, and a sub-acrid and styptic taste. A cataplasm made by bruising the fresh root and applied to the forehead is reported to relieve obstinate cephalalgia, and even to improve unhealthy sores, probably acting more by the warmth and heat which its application must communicate, than through any specific property in itself. From the dried root, a highly-fragrant water may be distilled, which is not without its use to correct the unpleasant effluvia of the sick chamber. BIB. REF. —*De Cond. flor. fr. edit.* 3 *vol.* 386. *Engl. bot. t.* 508. *Fl. dan. t.* 183.

VIRGINIAN WITCH-HAZEL.

This species of Witch-hazel, the *Hamamelis Virginica* of Linnæus, is an American shrub belonging to *Tetrandria*,* *Dyginia* of the same illustrious author, and to the natural order *Hamamelideæ* of De Candolle. Both in habit and locality it is a singular plant, some times being found only in acid and stony situations, and at others approaching the immediate presence of water. It ordinarily obtains to ten or twelve feet. The leaves are alternate, on short petioles, bistipulate, obovate, acutely toothed, and with a small heart-shaped recess at the base. The flowers, which are yellow, begin to appear in the au tumn, continue during the winter, and are succeeded by the fruit in the following spring. The calyx is four-lobed. Petals four, tongue-shaped, alternating with the teeth of the calyx. Stamens, the four fertile alternating with the petals, and the four sterile in front of each petal. Ovary free, ending in two

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* Vol. 4. † Medical Gazette, 1834.

* Sometimes polygamous, diœcious, monœcious, androgynous.—*Walt.*

short styles. Capsule coriaceous, half-free, two-celled, and two-valved at the apex. Seeds oblong and shining. By the Indians this shrub is highly esteemed as an article of the Materia Medica. The bark is both sedative and discutient, hence a decoction properly prepared is by no means an indifferent fomentation for painful tumours and for external local inflammations. A cataplasm made with the inner recent bark has been found particularly beneficial in ophthalmia complicated with great excitability or painful congestion. Of its internal use I have no account: in the hands of a judicious practitioner it might be available. BIB. REF.—*Lin. syst. nat. p.* 333. *Bot. Cab. t.* 598. *Mill. ill. t.* 10.

TOOTH-ACHE CACHRYS.

A little hardy perennial plant, frequent in the moist and muddy parts of Siberia, Tauria, and Caucasus. It is the *Cachrys odontalgica* of Pallas, and belongs to *Pentandria Digynia* of Linnæus, and to the truly natural order *Umbelliferæ*. The naked stem rises from eight to twelve inches; the leaves are decompound, clothed with hoary pubescence; the leaflets are short, linear and somewhat trifid; the flower yellow, and of course in umbels; calyx with an obsolete margin; petals ovate and entire; the leaves of the involucra and involucels are few and undivided; the fruit oblong, having the pericarps somewhat compressed from the back and hardly furrowed; seed constituting a free nucleus, covered with copious vittæ and deeply involute; and the cotyledons of the embryo diverging. The seeds appear to possess the property of inducing salivation in a high degree, hence the Cossacks of the Jaïk chew them for pain in the teeth, and obtain the desired relief through the copious secretion which is thrown out by the salivary glands. As they evidently excite the glands alluded to, might they not be beneficially given to promote glandular action generally?

The tooth-ache cachrys was introduced into the botanical gardens of this country in 1819; it succeeds well in any deep light soil, and may be propagated by sowing the seeds in the autumn.—BIB. REF. *Pall. itin.* 3. *p.* 720.

CLINICAL LECTURE,

FEB. 21st, 1837,

Delivered by S. COOPER, Esq., &c. &c.

Cases of Lumbar Abscess.

WITHIN a recent period you have witnessed under my care in this hospital two cases of lumbar abscess, both treated with success, and both remarkable as being double lumbar abscesses.

I am inclined to believe, that abscesses of the lumbar kind are more frequently unconnected with disease of the vertebræ, than is sometimes represented. At all events, I make this inference from having seen many of them cured in a much shorter space of time, than is well reconcilable, with the supposition of the bones being in a morbid state. At the same time, my experience teaches me to state, that many lumbar abscesses are undoubtedly combined with caries of the vertebral column; some take place as an effect of it, and often have a fatal termination. Indeed, it is this circumstance, with the opportunity of *post mortem* examinations in such cases, and the appearances found in them which render the opinion, that almost all lumbar abscesses, without exception, are so commonly joined with disease of the vertebræ. Yet, in other cases not thus complicated, as a cure is mostly accomplished, no such examinations are called for, and of course no record is made of the freedom of the spine from disease.

Many years ago, I attended with Abernethy, the daughter of a livery-stable keeper close to Fleet Market, who had a lumbar abscess, which presented itself above Poupart's ligament. A puncture was made in the swelling, and nearly a pint of matter discharged. The puncture was immediately closed with adhesive plaster, and as soon as the tumour became prominent again, the puncture was repeated, and then left open. In the course of two months, the discharge entirely ceased, and the girl who was about fourteen years of age, got well under a tonic plan of treatment.

Eliza Fox, aged 10, was admitted into this hospital last summer; a child of weak strumous habit of body. Her health indeed had been bad for some months, and for some time before she

came into the hospital, she had passed restless feverish nights, complained of loss of appetite, and obstruction of her bowels.

Three weeks before she was brought to the hospital, her mother perceived a swelling in the right groin, or rather above Poupart's ligament, free from pain and discoloration. It had gradually increased to the size of a pigeon's egg, and evidently contained matter. No deformity nor curvature of the spine was discoverable. I thought it advisable to let out the matter, and with this view made an opening with a lancet, and discharged about nine ounces of thick pus. The puncture was then closed with adhesive plaster. The child had meat daily, with half a pint of porter, and gr. j of sulphate of quinine in ʒ j of fluid inf. rosa. comp. twice a day, and 8 grs. of rhubarb, and ʒ of calomel occasionally.

The puncture did not heal by the first intention, so that on the removal of the first dressing, two table spoonsful of matter passed out. A poultice was applied.

On the fifth day, after operation, the discharge had begun to lessen; but it continued in small quantities for three weeks, at the end of which time the child was well enough to be made an out-patient.

The first abscess soon got entirely well, but, in consequence of another collection of matter forming in the left groin, the little patient was again taken into the hospital.

This second abscess was opened by me, and about 4 oz. of pus were evacuated. The puncture was kept open by the introduction of a bit of lint, between its edges. Full diet and half a pint of porter daily, and a table spoonful of the following mixture thrice a-day:—

℞ Iodinii gr. j, Hydriod. potassæ gr. x, Aq. ʒ vj, fiat mistura.

Under this plan, the child's general health improved—her strength increased—and her disease disappeared.

I believe the case is now perfectly well.

Had the vertebræ been diseased, I conclude that the favourable termination would not have happened in this speedy manner.

The next case of *lumbar abscess*, terminating successfully under me, is that of Caroline Tyler, aged 16, a decidedly scrofulous subject, as proved by what Andral would term the remarkable suppurative diathesis, exemplified in her. She is a girl of delicate appearance. Nine months ago, an abscess formed on distal side of the little finger of the left hand. The phalanx was attacked with necrosis and lost. Soon after this, she experienced for three weeks pain in the lower part of the back, and since that period has been compelled to keep her knees constantly drawn up towards the abdomen, to relieve the pain in her back; and the limbs seemed as if permanently fixed in this position. For eleven weeks, this young woman remained in the hospital of this city, where she tried warm bathing and electricity. For some time before she came to us she had been confined entirely to bed, and an abscess had formed and burst in the left groin, leaving a fistulous opening, from which large quantities of pus flowed.

On her admission into the North London Hospital, this discharge had considerably lessened; but another collection of matter had taken place in the situation of the right quadratus lumborum muscle, and formed a considerable swelling, almost ready to burst. At the time of its first appearance, she had severe pain in her back, but now she felt none; nor was there any obvious curvature or deformity of the spine, or pain on pressing any part of it.

One of the legs had been contracted eight months, and the other one month, and she was completely unable to straighten them.

I told you that she was decidedly scrofulous, as evinced by the frequency of abscesses about her. In addition to those already mentioned, as having taken place in the finger and loins, she had had others in the breast, and heel; and a glandular swelling in the armpit, which subsided as soon as the abscess of the breast had been opened.

On her admission, her appetite was exceedingly bad—her pulse 100—with thirst and night sweats.

Ordered to be put on full diet, and to take thrice a day 2 grs. of sulph. of quinine in ʒ j of infus. rosæ comp. and ʒ ss of tinct. of Gentian.

A few days after her admission, the abscess in the right lumbar region had become rather larger.

Mr. M'Intyre, who happened to be in Town, and to go round the hospital with me, was in favour of trying the actual

cautery; but I preferred a caustic issue, though I thought the chance of dispersing the abscess by this or any other means very poor. In fact, in ten days after the formation of the issue, the abscess burst through the ulcer left by the detachment of the slough made by the caustic, and a pint of pus was discharged. The flow of matter continued to go on copiously for a few days—but, in less than a fortnight from the time of the bursting of the abscess, she became much better, felt stronger, had no more night sweats, and her thirst and other hectic symptoms had all abated. Is now able to sit up in bed.

In less than a month from the period of the evacuation of the pus, with the aid of tonic and alterative medicines, and a good diet, she was able to walk with ease, though obliged to stoop a good deal. Discharge yet continued in small quantities.

In about five weeks, discharge was trivial.

In six weeks, both openings in the last abscess (for there were two) had healed up. Feb. 14th. She has this day been discharged as cured.

Abscess of Right Kidney and in Loins and Thigh.

Elizabeth Josling, aged 26, admitted Nov. 14th, 1836, a single woman, whose father, brother, and sister had died of phthisis. Had enjoyed good health till the age of ten, when she had a fall on the right side, followed by severe shooting pains in the right lumbar region, whenever she walked or exerted herself.

There was likewise a considerable discharge of blood with her urine, which continued more or less for five months, during all which time she was confined to bed. She recovered from this state, with the exception of pain in the right lumbar region, whenever she walked or exerted herself much, which part of her body also remained weak and much enlarged.

She continued in this condition till the 8th of September last, when she was delivered of a dead child. Soon after this event, she was seized with severe pain in the hypogastric and lumbar regions, and an immense swelling formed on the right side of the lumbar vetebræ, extending down towards the iliac fossa and thigh. I visited her one day for the purpose of making an opening, but the mere attempt to move her, brought on syncope, and I was obliged to renounce the idea.

After lingering longer than we expected, she sunk. In the post mortem examination, besides a collection of purulent matter in the kidney, distending its pelvis and infundibula, an enormous quantity of pus was found behind that viscus, and in the course of the psoas muscle, and in the posterior part of the thigh. Yet, all this, without any caries of the spine, merely a little irregularity of the ends of one or two of the transverse processes.

THE POOR LAW FOR IRELAND.

The introduction of a poor law into Ireland is now supported by all classes of politicians, and the great obstacles which stand in its way, are the difficulties of adapting such a law to the condition of that country, and in securing proper medical aid for such a large impoverished population. The medical charities of Ireland are now very numerous, though supported by voluntary contributions for the greatest part, but it is certain, that when the governors of hospitals and dispensaries are compelled to support the poor, most of them will cease to subscribe to medical charities. Add to this, that the English system of remunerating medical practitioners is proposed for Ireland, which would be ruinous to the profession and most prejudicial to the poor. It is manifest to every one acquainted with Ireland, that however benevolent the inhabitants may be, their means will not allow them to pay a heavy tax to erect and support workhouses, and at the same time to continue governors of hospitals and dispensaries. The effect of the poor law will therefore inevitably be, to destroy the latter institutions, unless it includes them in its provisions; and in such case the measure will be most unpopular. If it be impracticable to introduce protecting clauses into the Poor Law Act, which does not appear to be the case, then an other Act should be passed for the support of hospitals and dispensaries, and the medical attendance should be regulated by a board, consisting of two medical commissioners, who ought not to be in practice, and to reside in Dublin, with four medical inspectors for the provinces, to be under their direction. As to the idea of the poor law

commissioners of Somerset House, huckstering for medical attendance in Ireland, there never was a greater piece of absurdity. The tender system would fail in Ireland, where the profession will never adopt it, as they are far too independent. They now receive much better remuneration, though still an inadequate one; and if even deprived of this by the intended Poor Law Act, we feel perfectly satisfied that they never would attend for 2s. 6d. a head, or demean themselves by forming penny humbug and medical clubs, as some statesmen very foolishly propose. These clubs have totally failed in England, and are wholly unsuited to the impoverished population of the Sister Kingdom.

ON THE NATURE AND TREATMENT OF

TRAUMATIC TETANUS.

By Professor FRORIEP, *of Berlin.*

If it be conceded that traumatic tetanus is caused by inflammation of the nervous fibrillæ of the injured part, and that the irritation there arising, advances secondarily along the nervous trunk, and inducing that general morbid incitement of the system, which terminates in fatal exhaustion, it is obvious that the leading indication is to isolate the inflamed nerve from the rest of the organism. The importance of such a procedure can be alone verified by experience.

The isolation of the peripheral portions of the nervous system, may be effected in either of two ways:—

1. By amputating the entire part involving the nerves.

2. By dividing the nervous trunk betwixt the affected part and the central organ.

Experience has demonstrated that tetanus may be cured in this manner; for in some of Larrey's cases, where amputation had been resorted to, a successful result was obtained. And more recently a case of tetanus caused by a wound in the foot has been detailed by Murray, in which the patient was cured by division of the *nervus tiabilis posticus*. A similar instance to the above has been recorded by Larrey.

It is true, that by means of antiphlogistic, derivative, resolvent, and narcotic remedies, a cure has occasionally been effected. This is not at variance, however, with the view entertained, namely, that inflammation, is always the source of disease.

In most cases, indeed, the stage of exhaustion arrives ere the subdual of the local inflammation. Hence, the prognosis is bad in proportion to the rapidity with which the spasmodic paroxysms follow each other. And for this reason, narcotics are beneficial, inasmuch as they dull the morbid nervous irritability, thereby diminishing the reaction of the topic irritant upon the central organ, the frequence of the spasms, and keeping back the period of exhaustion. In the intervals, time may thus be procured for the effect of antiphlogistic treatment.

The irritation of the local stimulation is most securely prevented when the principal nerve of the member has been cut across. Narcotics then act more freely. And great care must be observed that the inflammation of the nerves be completely removed by efficacious antiphlogistic measures, before any re-action of the peripheral nervous branches can again take place in consequence of the adhesion of the divided ends of the nerve.

From the above considerations, the author conceives the rational treatment of traumatic tetanus to consist in,

1. Cutting across the nervous trunk, whose minute branches supply the seat of lesion, in order to gain time for,

2. The employment of such energetic means as may be required for overcoming the local nervous affection, before any re-action can be thence communicated to the general system.

No subsequent paralysis need be anticipated. Theory and experiment concur in demonstrating that so soon as reunion of the nerve is fully established, the functions return to their normal condition.

In this manner, neither mutilation (as is the case with amputation), nor palsy will result from the operation.

The author has adduced, in illustration of the principles laid down, seven dissections carefully performed by himself.

NEUE NOTIZEN.

Weimar,
January. 1837.

REVIEW.

The Continental and British Medical Review, or Monthly Therapeutical Journal. Edited by A. M. Bureaud Riofrey, M.D., &c. No. 1, March 1. Causton and Balliere.

A MONTHLY medical journal, containing practical facts from our foreign contemporaries, has long been a desideratum in our medical literature. Our weekly journals find it impossible, from their rapid appearance, to supply recent foreign discoveries, and our quarterlies are meagre on the subject. From the original papers which this periodical contains, the editor of our new contemporary evidently possesses the advantage of a personal acquaintance with the leading men abroad, which enables him to give their original communications exclusively.

The following extracts will shew the practical value of our new contemporary, to which we wish the success which it merits.

NERVOUS HEAD-ACHE CURED

BY A NEW METHOD OF PUNCTURE,

By M. MARTIN SOLON,

Physician a l'hospital Beaujon, à Paris.

"THE happy results of the inoculation of vaccine, induced M. Lafargue, a French physician, to try the inoculation of some other agents. This gentleman addressed several letters to the Academy of Medicine in Paris, and a report was made on the subject. As these experiments can do no harm, and as some good may result from this new method of introducing small effective doses of medicaments into the economy, we are happy to make this discovery known to our readers. The editor of this review has commenced experiments on the subject and will submit them to the Faculty.

A woman admitted into the *Hospital Beaujon,* was very subject to nervous head-ache, of which she has once been cured by the application of a blister on the temple, which was afterwards covered with an *unguentum muriatis morphiæ.*

Dr. Martin Solon made eight punctures in the temporal region with a lancet, impregnated with the solution of a quarter of a grain of muriate of morphia. The patient was speedily cured, but felt inclined to sleep during the day."

DISEASES OF THE WOMB.

Enlargement of this organ.—Necessity of Exploration.

"It is a well known fact, admitted by Englishmen themselves, that French practitioners have extended the limits of our acquaintance with pathology, and the internal treatment of uterine diseases: fifteen or twenty years since these diseases were imperfectly known, wrongly judged, and generally considered as cancers, thought incurable, and left to nature on account of their situation. The celebrated establishment in Paris, called *la Maternité,* so admirably conducted by Mesdames Boivin, La Chapelle, and Legrand, undoubtedly gave rise to the progress, so beneficial to humanity, of the pathology of the uterine organs, and the treatment of these diseases.

"If innate modesty might lead females labouring under a direful disease, not to submit to the necessary exploration required by their medical attendant, the same motive could not exist when this task devolved upon women. In former times a feeling of decency caused females to prefer the assistance of midwives in their confinement. The first person who broke through this rule was no model of virtue, or example for good wives and modest women, but the celebrated mistress of a mighty monarch. Foreign practitioners who visit England are forcibly struck at finding that English ladies, so lauded abroad for their sense of modesty, should be attended by men in their confinement. Far be it from us to condemn this practice, but it singularly contrasts with the aversion shewn for the necessary exploration in cases of uterine diseases, which frequently prove fatal for want of a due share of judicious attention. An accouchement is not a disease, but a natural function seldom requiring the aid of a clever practitioner —an accouchment can take place without the assistance of art; it is a well known phenomenon, and whatever relates to it is previously understood. This is not the case with diseases of the womb, their complications are numerous: the symptoms may not lead to a knowledge of the particular state of the disease, and it may be essentially necessary for the practitioner to ascertain by the touch, or by inspection, the precise nature of the internal malady.

"The learned editor of the Medico

Chirurgical Review lately observed, that 'In proportion as the alterations which constitute diseases are capable of being appreciated by the senses, our notions of that particular malady are more determined and satisfactory. This is the advantage which surgery possesses over physic. The subjects of the former are palpable and immediate; those of the latter more shadowy and remote; and the consequence is, that surgeons are frequently more exact in their ideas of disease than physicians are.' We perfectly agree with this clever writer—such is the situation of the uterine organs, that they must be considered as the province of the physician; and consequently treated according to general symptoms, in a manner more shadowy than palpable, more uncertain than certain. To take the diseases of the uterus from the hands of the surgeon who treats them surgically, or in a positive and palpable manner, to give them to the physician who treats them in a blind manner, is to diminish the chance of cure for the patient, and sacrifice to sympathy for an instinctive feeling of modesty, life's brightest treasure, *health*, which to wives and mothers must be invaluable. After these preliminary observations which are appropriated to the present subject, we shall consider the diseases of the womb in different chapters; and without being too strong partisans of the speculum, we acknowledge its utility, and think it should be employed whenever there is reason to suppose that its use may facilitate the cure of a serious disease, and that the patient is not averse to it. We are by no means of opinion that the speculum is invariably necessary, in diseases of the womb; its application ought to be avoided as much as possible, and recourse should only be had to it in imperious cases where some operation is considered indispensable.

"That diseases of the womb are never cured without the assistance of art is a fact admitted by all enlightened practitioners. This organ, united to the whole economy on account of its sympathies, is liable to various diseases, owing perhaps to its situation, or functions it has to perform. No organ undergoes such great modifications as the uterus; and instead of the numerous affections to which it is subjected being a matter of surprise, we should rather admire the wisdom of nature which gives to the living tissues a strong power of resistance, not existing elsewhere. What organ besides the uterus could expand and contain one, two, sometimes three fœtuses, and then return to its primitive form, and fulfil the same functions several times.

"Madame Boivin and M. Dugés observe that the organs of generation in females are naturally liable to serious and numerous derangements: the more active is a machine, the more susceptible it is of being put out of order: and the numerous functions of the womb are necessarily, so many causes of organic and functional disease.

"The womb being so important an organ, exposed to so many diseases, can we look with indifference or disdain on the means employed by the practitioner, to give to its diagnostic the certainty on which its treatment may be founded? One word more on the touch, and the speculum. In all times medical men have had recourse to the touch. The use of the speculum may be traced to the most ancient period. Dr. Recamier, who lately introduced it into French practice, is one of the cleverest, most estimable, and most religious men of the day. We shall give a series of papers on the diseases of the womb. The 1st on the hypertrophy of the womb, without induration. 2d, of induration, with or without hypertrophy. 3rd, of ulceration. 4th, of tuberculous. 5th, of scirrhous, and 6th, of the various species of cancer.

"By the word hypertrophy, is understood the enlargement of the womb, fully, or partially. Hypertrophy always supposes an increase of the womb, caused by an accumulation of liquids in the capillary vessels. Later on, we shall treat of the tuberculous, or cancerous, and other productions which complicate the hypertrophy.

"Hypertrophy of the body of the uterus seldom takes place, but hypertrophy of the neck of the uterus is very common, and requires the most speedy and judicious attention; as it is generally the forerunner of all the diseases of that organ.

"Monsieur Dugés and Madame Boivin think that the enlargement of the womb is a form of the metritis; and as it would be difficult to trace the cause of it, without admitting an irritation, or excitation, we are not far from adopting this opinion. in as much as it agrees with the treatment we have generally found successful. 'In common induration of the womb,' says Madame Boivin, the primitive tissue

is in some way obstructed by an accumulation of albuminous liquid, without material alteration of the tissue. According to Duparque, the hypertrophy of the womb is caused by an œdema of the neck of the uterus, and more frequently by congestion of blood, with or without hæmorrhage; we rather differ in this instance from Duparque, as we have seldom met with œdema; but frequently with various discharges of mucous matter. Whatever may be the cause of hypertrophy, the main point is to ascertain its nature, and then to adopt a proper treatment. The hypertrophy of the uterus, whether œdematous, or sanguine, or with hæmorrhage, nearly always presents the same general symptoms, which can be known without exploration, by the finger or speculum.

"*General symptoms of the hypertrophy of the womb.*—Weight on the bladder, frequent inclination to make water, attended with pain, relief when recumbent on the back, continual heat, dumb pain in the depth of the hypogastrium, pruritus, unusual warmth in the pelvis, frequent constipation, pain in defecation, weight on the sacrum, occasionally excruciating pain in the whole extent of the abdominal limbs, heaviness, pains in the groins and the lumbar region. Sometimes a slight, sometimes a continual fever; sometimes hysterical fits, principally during the presence of the catamenia; the groins painful on pressure, discharges from the womb of various kinds, but seldom of blood.

"Such are the general symptoms of the various alterations to which the womb is liable. Let us now inquire how to establish their different characters, and the true diagnostic on which the indications of the treatment may be founded.

"There may be inversion of the womb, preternatural growth, or polypus, or scirrhous. Can the same treatment be equally adapted for each of these different diseases? Can any intelligent physician prescribe a remedy for a disease which he only suspects, when he has it in his power to ascertain whether it really does or does not exist?

"It may be thought that exploration by the finger is an easy, a common task, that can be performed effectually without an acquaintance with the different physiological and pathological states of the womb,—this is by no means correct.

"To elucidate this observation we shall relate a case that occurred to us in our own practice, which proves the importance of exploration by the finger, and how much habit is requisite to be well acquainted with it.

"A widow lady called on us, and complained of shooting pains in the back, in the groin, in the epigastrium, constant inclination to make water, and frequent constipation; but what distressed the patient was her inability to walk, her legs felt heavy, and she could scarcely move them; she had a slight white discharge; her hypogastrium was swelled, and seemed distended by wind. I suspected an enlargement of the womb, or a polypus, or an inversion, or a descent of the womb; unable from the symptoms, to ascertain the precise nature of the disease, I recommended an exploration by the finger, to which she would not submit. I then prescribed tepid baths, some harmless medicine, and repose on the back. A fortnight afterwards the lady returned, complained of the same uneasiness, and enumerated the same symptoms. I again assured her it was impossible to form a correct judgment of the disease, without exploration, and proposed calling in a very clever midwife. This plan met with the lady's full approbation, and at the appointed hour, on the following day, the parties met in my library, and I left the room; the exploration terminated, the midwife came to me in the adjoining apartment, and relating the result of the investigation, asserted that the lady was pregnant. I did not communicate this statement to my patient, but feeling annoyed that she should have attempted to deceive me, I merely advised her lying down as much as possible on a sofa, taking nourishing food, which I thought would probably cure her debility.

"The lady returned again in a few days, and complained of the same symptoms, and that she had found no relief from my prescription. I did not expect you would be so soon cured, was my answer; a few months more must elapse ere you can be freed from all your pains; and, I added, the first step to recovery is an acquaintance with the disease. Why ask my advice without telling me your situation? The lady replied, she did not understand me. I then imparted to her the intelligence I had received from the midwife. The astonishment and indignation she shewed cannot be described. She rose and said, Sir, you do not know me, you are ignorant of my

name, my connection, my situation in life, and you can have no reason to injure me. I am decidedly averse to an exploration; but I must protect my own honour. Now, Sir, judge for yourself, and appreciate the opinion of the midwife.

"Let us ask whether this lady could be considered indelicate or immodest? Was not the spontaneous feeling which led her to submit to an exploration prompted by virtue? I soon perceived the midwife had been mistaken; the lady then gave me her name and address, and introduced me to her family, which was highly respectable. I have continued my professional attendance; she is perfectly re-established, and I shall relate in what manner I treated and cured her.

"In hypertrophy of the womb, says Lisfranc, in the exploration by the finger, the same sensation is felt as when the uterus contains an embryo of five or six weeks. Madame Boivin has advised great attention to be given, in order to distinguish the commencement of pregnancy from the diseased enlargement of the womb. The midwife I have referred to was misled, because she was only accustomed to judge of the state of the womb during pregnancy, and not of diseases of the womb.*

"Exploration by the finger, says Madame Boivin, can alone furnish correct indications of the state of uterine diseases.

"Hooper justly observes, that hypertrophy frequently follows prolapsus of the womb. It would be more proper to say that hypertrophy of the womb generally precedes and causes prolapsus, for the weight of the uterus drags on the large ligaments, and the ligaments being more or less influenced by the disease, lose their strength, and cannot resist the unusual weight of the organ. Thus every enlargement, whatever may be its nature, is followed by prolapsus of the uterus, in a greater or less degree. This state of the womb being the immediate consequence of the enlargement, by treating the enlargement the prolapsus will be cured. We insist on this point, says Lisfranc, because, in the majority of cases, the uterus is brought to its natural position. We insist on this point, continues this surgeon, because, in common practice, when prolapsus is treated, the disease is attributed to weakness of the ligaments. That there are cases of prolapsus without enlargement we readily admit, but they are very rare. In England mistakes of this kind are often made by some of our countrymen, assuming the title of French physicians or surgeons, and ladies who have been so unfortunate as to apply to them for advice, have worn pessaries for years, which, instead of giving benefit, increase the pain and create inflammation. Therefore, the first step to be taken to obtain a diagnostic, is exploration by touch, in order to ascertain whether there be prolapsus, or misplacement; the state of the neck of the uterus, the lips more or less round, the orifice more or less deep, the consistency variable.

If pressure by the finger gives pain, and the place where the finger presses is diseased, there is also a great degree of heat. It seldom happens that the whole neck of the womb is diseased; if the neck of the uterus be indurated, unequal, and pressure by the finger gives no pain, but the patient feels occasional lancinating pains, there is reason to expect the existence of a scirrhus, particularly if there be sometimes discharges of blood. If there be a polypus, the finger can easily distinguish it, because there is no orifice, and generally it is easy to attain the pedicule.

The different inversions of the womb are easily ascertained, the neck of the uterus presses on the bladder, or on the rectum, and the body of this organ is always in an opposite direction.

The hypertrophy by congestion must not be confounded with the softening of the womb, which resembles the skin of a rotten apple. Lisfranc calls this *ramollissement, cancer occulte.*

Let us now suppose, we have not met with a scirrhus, nor a case of pregnancy, nor a polypus, nor any misplacement of the womb; but hypertrophy of the womb, attended with prolapsus. How are we

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"* This reminds me of a case related by Dr. Gooch, in his excellent work on 'Diseases peculiar to Women,' he says, a genteel person called on him, and related the symptoms of her complaint, which were exactly those of pregnancy. She said, she was not married; but that she could not leave his house without knowing the precise nature of her complaint. Dr. G. said, he *thought she* was pregnant, but this did not satisfy her. He then told her there was only one way of determining it, which he explained. After a little agitation, she consented to an examination, which enabled Dr. Gooch to ascertain the real state of her womb."

to act. We must carefully distinguish enlargement or hypertrophy of the womb, acute inflammation, from hypertrophy, not attended with inflammation. In the first case, on the surface of the vagina, and on the neck of the uterus, there is a sensation of heat; examination per vaginam gives pain, which extends to the neck of the bladder. In the second case there is no pain, no heat; it follows, as a matter of course, that these different states require different treatment.

The surgeon of the hospital *de la Pitié* in Paris, says, that, in the first instance, recourse must be had to antiphlogistics, complete repose, emollient injections nearly cold, warm baths, and revulsive bleeding; but if the patient be strong, plethoric, and there is feverish reaction, the treatment must commence with bleeding, emollient beverage, and complete repose of the diseased organs; light diet, consisting of milk, vegetables, white meat, and fish; nevertheless, the general habit and constitution of the patient must be considered.

This treatment is simple, but must be scrupulously and tenaciously followed; *the cure* of a disease of the womb is always longer than any other. Nothing can be done seven or eight days previous to the menses, nor while they last; and this congestion, which happens every month periodically, although physiological, exercises a pernicious influence on the permanent morbid congestion. The physician and the patient must therefore be armed with patience. The time requisite for a cure is from one to three months. We must remember, says M. Lisfranc, that the progress of the cure cannot be ascertained by the pain, which sometimes increases as the enlargement diminishes.

This therapeutic sketch drawn by Lisfranc is not sufficiently complete, it sometimes happens that inflammatory enlargements are not modified by the means employed to subdue them, however efficacious these means may have sometimes proved. M. Duparque very justly compares inflammatory enlargement of the womb, to pneumonia with hepatisation, and glossitis, which led him to prescribe antimonia or a resolutive, by the endermic method, and experience has justified his expectations. It must, however, be remembered that treatment by tartarized antimony can only be had recourse to, when the acuteness of the metritis is diminished by antiphlogistics. M. Lisfranc makes no mention of local applications; he appears to keep them in reserve for atonic hypertrophy. Duparque is of opinion, that in acute metritis, the effects of local bleeding are not less prompt or less efficacious than those induced by the friction of tartarized antimony.

One of these two opinions must be adopted, and from the numerous cases seen in the hospitals, and in our practice, we think that M. Duparque's observations are applicable only to the inflammatory *enlargement*, and not the simple metritis, yet general depletion must first be had recourse to.

Duparque says scarification on the neck of the uterus might be employed without fear, when the enormous enlargement of this part has not given way to the therapeutic means generally taken in similar cases. Incision might be made from the orifice to the circumference, the depth and breadth in proportion to the size of the enlargement, and they would probably leave but very slight traces; but these incisions might become ulcerations or fissures; the cicatrix arising present obstacles to the dilatation of the orifice of the womb in subsequent accouchements: this method cannot therefore be adopted.

"But there can be no danger attending the application of leeches; the immediate decrease of the enlargement is remarkable after an evacuation of blood, not only when the neck of the womb is diseased, but even when there is general metritis. It is never safe to apply more than eight or ten leeches at a time, for fear of hemorrhage.

In cases of acute metritis, the fluxionary motion must be arrested, and the general symptoms moderated by the usual treatment, before recourse is had to leeches; care must be taken not to exhaust the patient.

"Sanguine depletion of the neck of the uterus has proved so beneficial in the treatment of acute inflammatory enlargement, that we have no hesitation in saying that it may be considered as the best possible remedy.

"When there is hypertrophy without pain, says Lisfranc, and only slight heaviness in the pelvis, the patient is in a chronic state; revulsive bleedings, cold baths, if they suit the patient, plain shower baths, then medicinal shower baths. Fifteen leeches may be applied with benefit to the neck of the womb, to bring on a resolution; moderate exercise, dry or scarified cupping, hip baths,

will entirely remove the affection. As there is no induration, bitters are prescribed, not resolvents; if there be any excoriations, the speculum may be safely applied.

"In answer to the preceding observations, we need only remark that it would be difficult to apply fifteen leeches at once on the neck of the uterus; and that this operation requires the use of M. Recamier's speculum—the other instrument of this nature being open at the sides, the leeches may easily get away.

"We have often prescribed leeches on the neck of the uterus, and the result has always been satisfactory; but if more than eight or ten be applied, there is no room for them in the speculum, and they drop off without taking a sufficient quantity of blood. This operation seldom lasts more than a quarter of an hour, and gives no pain. When the leeches are in the speculum, it is covered with a fine bit of linen to prevent them from falling out. The patient can hold the speculum herself, remaining covered until it is time for the medical attendant to take away the leeches. Women have so great a dread of the leeches remaining in the inside, that it is always advisable to count them before they are used, and count them as they are taken off, in order to satisfy the patient. On the whole, we think the application of leeches on the neck of the uterus, in cases of enlargement with inflammation, as rational as their application on any *inflamed tumour* on the external part of the body. Prolapsus of the womb arising from enlargement, has often been cured by leeches being applied two or three times, and precludes the necessity of wearing a pessary, which is always an uncomfortable remedy.

A CASE

OCCURRING IN SURGICAL PRACTICE.

By John R. Young, M.D. Surgeon.

Extirpation of a Tumour from the Face.—Unavoidable Section of the Parotid Duct.—Treatment.—Cure.

Johanna Bryan, a poor widow, æt. about 40, and following various occupations, in which I believe mendicancy predominated, applied to me some time since respecting a large tumour, of twelve years' growth, which occupied the left side of her face, extending in a vertical direction from a little below the base of the jaw to about the zygomatic arch, and reaching transversely from a little in front of the ear to a position nearly corresponding with the canine tooth of the same side. The tumour appeared unattached, but its situation involved a danger of injury to the parotid duct; however, as the woman's face was greatly disfigured, and the tumour seemed latterly, by the woman's account, to be acquiring a more rapid growth, I decided on its removal.

Operation.—As I considered it desirable, if possible, to avoid crucial incisions on the face, I determined on a free longitudinal incision, and accordingly made one nearly six inches in length, corresponding with the longer axis of the tumour, and reaching obliquely downwards and forwards from above the malar extremity of the zygomatic arch to below the base of the jaw, taking care to avoid the trunk of the facial artery crossing in front of the masseter muscle. This incision was not in the first instance carried completely down to the tumour, and in this stage the parotid duct was found crossing the tumour like a strap. To attempt disengaging the tumour in any way without cutting the duct, seemed likely to render the operation tedious and troublesome, and productive of unwarrantable injury to the parts around. I, therefore, next carried the knife along the line of incision completely and fairly down to the substance of the tumour, thus unavoidably dividing the duct of the parotid. The next step was to dissect back the flaps on each side, carrying the knife with its edge directed towards the tumour, and as close to its surface as possible. The flaps were then held back by assistants, the tumour was grasped and lifted up, and a few strokes of the knife, carried underneath at each side, easily completed its removal. The patient fainted at the commencement of the operation, so that the hæmorrhage was very trifling. The tumour was of a substance resembling fat, but much more consistent, with bands running through it in various directions.

Treatment.—In the first instance I resolved to give the divided duct a chance of uniting, by bringing the edges of the wound carefully together and retaining them "in situ" by the proper means. In twenty-four hours union had taken

place along the whole line of incision, but the cheek was greatly distended, and painful, and the woman hot and restless. I immediately tore open the lower half of the line of incision, and gave vent to a large quantity of saliva tinged with blood. Being thus disappointed in my expectations of a speedy union, and anxious, if possible, to avert the establishment of a salivary fistula, with its disagreeable accompaniments, and a subsequent operation, I turned to the books within my reach, but met with no mode of treatment which seemed to give a hope of success.

Reasoning, then, upon broad scientific principles, I considered that the best way of treating the case would be by keeping open that portion of the duct connected with its natural opening into the mouth, and waiting until the healing of the external parts should, as it were, compel the saliva gradually to seek its old channel, which was in the mean time to be kept open to receive it. To effect this object, I used the fine-pointed extremity of a small quill, having, of course, first stripped it of its feather and made it smooth. After a little difficulty, I succeeded in getting it into the small natural opening of the duct in the mouth, and having pushed it on until the extremity of it appeared in the external wound, I suffered it to remain in that situation for a few seconds, and then withdrew it. This treatment was persevered in for a few days, and I was at length gratified one day, on withdrawing this very inartificial bougie, to see a little saliva through the orifice of the duct in the mouth. From this time the case rapidly advanced; the external discharge of saliva, which had been very copious, gradually diminished, and in twelve days from the operation the wound was healed, and the woman's cheek now retains little sign of the incision.

The above case has in it nothing peculiar, save the rapidity of the cure, which was dependent, I presume to suppose, on the mode of treatment, which, so far as I am aware, is new. At all events, be it new, or be it proved by some gentleman, with the contents of a library in his head, to be as old as the Patriarch of Cos, it is sufficiently simple, has been eminently successful, and is an additional proof of the docility of injured ducts, when treated on scientific principles.—*Lancet.*

The London Medical

AND

Surgical Journal.

Saturday, March 18, 1837.

THE LONDON UNIVERSITY COLLEGE.

THE public continue to look with no small degree of interest, on what will be the result of the intriguings and jobbings which have been, and still are going on, amongst the medical officers and shareholders of the Joint Stock Company in Gower-street, for filling up the vacant chair of chemistry.

We have reason to believe, that Dr. Christison is too well satisfied with his position in the University of Edinburgh, to run the risk of sacrificing his popularity, or mixing himself up with the corruptionists of the mock liberal college.

Dr. Apjohn of the Dublin college, it is rumoured, has been solicited to fill up the situation. His abilities as a chemist, and his talents as a lecturer, are of the first order, and he is one of the most *liberal* members of the profession in the sister kingdom. We are extremely doubtful that he would accept of a chair in any school, wherein the principles which he has endeavoured to inculcate have been so audaciously prostituted.

It may be said, no doubt, that there is an individual in the council of the College of Surgeons, in Lincoln's Inn, who was once the strenuous advocate of medical reform, and who, from the love of office, has had the boldness to forfeit every opinion, moral and political, at the shrine of apostasy; but we augur much better things of our Hibernian contemporary, and even did he ac-

cept the vacant professor's chair, he would not degrade his country by deviating from the manly and independent line of conduct, which he openly displayed in the exercise of his elective franchise, when the constituency of Trinity College did not amount to a hundred electors. The introduction of such a man amongst the contemptible jobbers of Gower-street, would cause confusion and dismay amongst their ranks, and "strike terror to the soul of Richard." If Dr. Apjohn can be induced to accept of terms, he will indeed be a great acquisition to the tottering machine.

We do sincerely hope that, for the present at all events, Mr. Samuel Cooper will continue to occupy the chair of surgery unmolested, and that the college will not suffer in its reputation from the loss of the valued services of that praiseworthy and industrious individual. The assistance which he has judiciously availed himself of in some of the mechanical parts of surgery, whilst it will render his course more complete, will enable Mr. Cooper to devote his undivided attention to the most important branches of the course.

VACANT PROFESSORSHIP OF ANATOMY IN TRINITY COLLEGE, DUBLIN.

Some weeks since we announced the fact that *Dr. Macartney*, the professor of anatomy and physiology in the University of Dublin, had virtually resigned the chair he had filled for so many years with credit and profit to himself and value to Trinity College. We also expressed our belief that great difficulty would be experienced by the board of the university, in its selection of a man whose abilities and integrity would be equal to the proper performance of the important duties which the vacant professorship required, particularly as the lowest intrigues were long since set on foot in *other* quarters besides Dublin to secure the appointment for a friend or a relative, when even the long wished for vacancy occurred, either by resignation or by *death*.

As journalists, who have always taken the most lively interest in the welfare of the profession in Ireland, we trust that, notwithstanding the present party feeling which exists within the walls of Trinity College, that no political influence will be allowed to sway the minds of those whose duty it will be to select a *fit* and *proper* person for the professorship; one whose ascertained abilities and energies will be the best security for the due performance of his duties. Indeed we would go this far in saying, that the man, who has directly or indirectly been in the habit of figuring in the wild field of politics, should be altogether excluded as a candidate for the professorship; for it will be soon found that such a person's mind is too cramped and narrow to survey the wide domain which belongs to the sciences of anatomy and physiology, and that instead of the chair in such hands being made subservient to its legitimate purpose, it will become a narrow arena of political bigotry and puffed up arrogance.

We are well aware of the many political engines which, from time to time, within the last three or four years, have been employed by certain individuals to ensure the support, upon a vacancy occurring, of the more bigoted fellows of Trinity College;—anecdotal public

displays of conservative feeling, whilst resolving the intricacies of the human frame—parliamentary evidence of apostacies—activity in ensuring the return of illiberal members for Trinity College, in the hope of *quid pro quo*—nay even a PAPAL BULL was hurled at one time, but the forgery was soon exposed. These, amongst thousands of other devices, will no doubt, upon the present occasion, be brought into play; but, as sincere friends to the welfare of the medical school of Trinity College, we implore the fellows, in whose hands the election to the vacant professorship is, not to be influenced by such charlatanery, but to have sound proof of the abilities of the candidates. We would also beg to guard them against the CERTIFICATES of talent, ability, &c. &c. which will no doubt be presented by many of the candidates; these are at all times easily procured from men of undoubted ability, but whose good nature and friendship too often hold their judgment in abeyance. *This kind* of "CERTIFICATE SYSTEM" we shall offer some observations upon at a future time, but we think it advisable at present to give the caution.

EX-PROFESSOR GREEN.

Whatever may have been Mr. Green's frailties and short-sightedness in quitting the Theatre of St. Thomas's Hospital to associate with the holy men of King's College, it is highly creditable to him, that on returning from the deserted benches of the surgical chair, he presented to the establishment all the drawings, casts, diagrams, and other implements of teaching, which he was in the habit of employing in illustration of his lectures on surgery. Though Mr. Green's private fortune has induced him to relinquish the toils and vexations necessarily attending the practice of his profession for the aggrandizement of "filthy lucre," it redounds to his credit and is equally honourable to his feelings as a member of the community, that he continues to execute with unwearied diligence and punctuality, his professional functions in that great and important charitable institution, St. Thomas's Hospital, and which duties it is most sincerely hoped he will long be able to fulfil. To those who are sincere well-wishers of the medical profession, it has been often a theme of regret, that the great mass of those who are educated in medicine should be needy men—men who have nothing to trust to for their worldly support, but the exercise of their professional duties, whilst it is also a just theme of regret, that most medical men, when they are advanced in life and fully occupied in the fee trade, care little about scientific pursuits, or of diffusing the practical knowledge they may have acquired. It would indeed have been an ornament to the profession had such men as Sir Astley Cooper, and individuals similarly placed, in regard to public iustitutions, instead of allowing their mind to be absorbed in hunting after a sovereign and a shilling, long after they had accumulated wealth far beyond competency, had they like Mr. Green relinquished the trade of the profession, devoted their energies to the cultivation of medical science, and continued to perform their professional duties in those charitable institutions, which they made use of as a mere stepping-stone to the accumulation of private fortune.

ANIMAL MAGNETISM.

Lecture delivered at Edinburgh, on 23d January.

By JOHN COLQOHOUN, Esq.

AFEER a few preliminary observations, in the course of which Mr. Colquhoun claimed some little indulgence on account of the novelty of the subject in this country, and many prejudices entertained in regard to the facts and

the tenets of Animal Magnetism, the ludicrous, and even malicious, misrepresentations to which they are continually exposed, the obstacles they have invariably had to encounter in the jealousies and petty interests of professional men, and the proverbially "learned illiberality of medical bodies;" as well as the determined opposition they have almost constantly experienced from the *exclusives* in science,—Mr. C. thought it proper to state, at the outset, that the limits of his plan would necessarily restrict him to a very general outline of an exceedingly comprehensive subject, and he therefore recommended the study of it in the works of practical authors.

The fate of Animal Magnetism, he observed, has hitherto been as remarkable as the facts it has developed are extraordinary. Deeply and firmly founded in natural instinct, cradled, as it were, in the bosom of the most remote antiquity, the influences of this obscure agent have never ceased to be more or less clearly recognised by mankind, although, for a long period, they were left entirely unregarded by philosophy. But although apparently too simple and insignificant in themselves to attract the serious notice of supercilious science, an almost universal opinion of the reality and the efficacy of these influences was nevertheless rivetted in the common belief of the people, in which it was preserved for ages, associated indeed, as might naturally be expected in unenlightened times, with a great deal of error, mysticism, superstition, and delusion. It is rather remarkable that, for a long time after philosophers had begun to pay some little attention to the belief in question, it was the popular errors and superstition which almost exclusively attracted their notice, and incurred their reprobation; while they entirely overlooked, or would not condescend to investigate, the reality of the facts. At a later period, indeed, the reasonableness of this belief was maintained and propagated by a pretty numerous class of intelligent physicians and philosophers, who, although in somewhat mystical, and sometimes not very intelligible terms, boldly announced their opinions; and, in support of their conviction, did not hesitate to appeal to the testimony of experience, the ultimate arbiter in all questions of fact. Afterwards these opinions incurred the derision of the greater part of the physical philosophers of a subsequent age, who were too deeply engaged in the study of matter, to pay any particular attention to the phenomena of spirit; and, accordingly, the facts alluded to were either entirely, blindly, and obstinately denied, or they were ascribed, as was the fashion down to a late period, to the agency of supernatural powers. In this state nearly does the subject still remain with us in this country—with this difference, that the theory of *Imagination* appears to have superseded that of *supernatural agency*. At length, within the last half century, the belief in question has not only been amply and incontrovertibly demonstrated by numerous, and unimpeachable, and decisive experiments. A vast number of most intelligent individuals, some of them occupying the very first places in the temple of science, along with several of the most eminent scientific societies in Europe, who had once been foremost in unbelief and condemnation, have at length, after the most rigorous investigation, found themselves compelled to yield to the irresistible force of the evidence; and the truth and the value of the physiological discovery are now universally recognised by every competent authority upon the Continent. Of all the nations of Europe, Great Britain now stands alone, still adhering to the old and elsewhere exploded prejudices, and declining to investigate the subject, or to give credit to the investigation of others. But *magna est veritas et prævalebit*—Science is of no particular country—it is a citizen of the world; and truth, when once fully discovered, must be universally acknowledged in the end.—Thus, the fate of this interesting doctrine would appear to resemble one of those mighty rivers, whose current is lost, and found and lost again; until, in the course of time, it is ultimately discovered emerging from its subterranean channel, and once more rolling majestically along in the light of day.

The name of Animal Magnetism has been given to that organic susceptibility which renders the nervous system of one individual capable of being affected, in various ways, by particular processes performed by another, especially when accompanied with faith, or, at least, a certain abandonment in the patient,

and with firm confidence and an energetic effort of volition on the part of the operator. The name is often indifferently employed to designate the influential agent—whatever that may be—the processes themselves, and the effects produced.

Animal Magnetism professes to afford a rational explanation of many of those curious and perplexing phenomena, which were formerly ascribed to magic, fascination, witchcraft, and sorcery, by demonstrating that many strange occurrences which were for ages attributed to compacts with the devil, familiar spirits, and to some species or other of supernatural agency, must ultimately be viewed like all the other phenomena of the universe, as merely the natural effects of certain natural causes.

It is sometimes dangerous to interfere with the common and frequently inveterate opinions and prejudices of the people. In such times of ignorance, the ways of Providence in the administration of the affairs of the universe, were very imperfectly understood. Far from having any notion that the ordinary government of this world is carried on by means of general laws, of second causes, established by the Creator from the beginning of time, every remarkable, every unusual event, was considered out of the regular course of nature, and directly attributed to an immediate interposition of the Deity. Even the wise, and otherwise most intelligent Athenians—to whom literature and the fine arts, no less than general philosophy, are under such infinite obligations—even the enlightened Athenians had an utter aversion to all those philosophers who attempted to account for the phenomena of nature by general laws. Among them, for example, an eclipse was considered a prognostic given by the gods of some grievous impending calamity. Anaxagoras, one of their most famous philosophers, was accused of atheism, imprisoned and persecuted, for attempting to explain the eclipse of the moon by natural causes; and Pretagoras was subsequently banished from Athens for maintaining similar doctrines. Even in more familiar instances, and in much later times, occurrences of far easier explanation were attributed to an infamous compact with the evil one. When the first German printers carried their books to Paris for sale, so supernatural did this rapid multiplication of copies appear, in comparison with the tedious process of manuscript labour, that these ingenious tradesmen were actually condemned to be burnt alive as sorcerers, and only escaped punishment by a precipitate flight. In a work entitled *Le Tresor*, written in French, about the year 1260, the author, after stating that the magnetic needle would be highly useful at sea, observes that "no master mariner dares to use it, lest he should fall under the suspicion of being a magician; nor would the sailors even venture themselves out to sea under his command, if he took with him an instrument which carries so great an appearance of being constructed under the influence of some infernal spirit." To come still closer to our own case: during the 15th and 16th centuries, the belief in sorcery and witchcraft was so universally prevalent, that to express a doubt of their reality was sufficient to draw down upon the unfortunate sceptic a charge of atheism and impiety, and the preamble to a statute of Henry VIII., in the year 1511, set forth, "That *Smiths*, *Weavers*, and *Women*"—rather a singular association of personages—"boldly and accustomably take upon them great cures, and things of great difficulty, in which they partly use sorcery and witchcraft."—Even at the present day, in this age of reason and intellect, I am not certain that this belief in the occasional production and cure of diseases through the influence of supernatural agency is entirely extinct; nor that I myself, in consequence of my humble efforts to illustrate the doctrine of Animal Magnetism, have wholly escaped the suspicion of some underhand dealings with the ugly old gentleman in black. Do we not still hear of certain hysterical, epileptic, and other spasmodic complaints, which are ascribed to demoniacal possession, and cured either by the immediate interposition of the Deity, or by soliciting the aid of the Devil? What was the meaning of the *morbus sacer* of the ancients, and upon what principle, at the present day, do the Roman Catholic Priests proceed in their solemn exorcisms?

In all ages, and I believe, I may say, amongst all nations, a certain sanative efficacy has been usually ascribed to the touch of the human hand, to the placing of it upon a sick person, or

using this application as a topical remedy, by rubbing with the hand any part of the body that may happen to have been exposed to injury. This fact, indeed, must have been quite familiar to all of us from our childhood, although, for ages, philosophy disdained to pay any attention to a process so obvious, so natural, and so simple; and consequently no attempt was made to generalize the effects, or to assign any satisfactory reason for the soothing influence of this instinctive operation. But, as I have elsewhere observed, it will probably be found, upon due investigation, that nature never confers a general instinct, without having some particular and appropriate object in view; and in the present instance, the specific end is so immediately obvious, that it appears truly surprising that it should so long have escaped notice; or rather that, having been once noticed, it should afterwards have been overlooked and neglected. Notwithstanding all the ridicule which has been occasionally heaped upon the simple principles of Animal Magnetism, I confess I am not among the number of those who conceive that philosophy can suffer any real degradation by availing itself of the obvious indications of nature. Why is not the same contempt transferred to the kindred phenomena of the mineral magnetism, of electricity, and of galvanism?

Natural instinct prompts a patient to apply his hand to any part of his body in which he feels pain. If he should happen to have received a blow, or any local bodily injury, the hand instinctively moves towards the suffering part, and probably rubs it gently. In the same manner, in the case of a headach, or any other painful morbid affection, it almost invariably happens that we naturally seek relief from the application of the hand to the region where the pain is felt. In similar complaints, too, an alleviation of pain is frequently experienced from the same operation, when performed by another person, with the serious intention of relieving the painful sensation. This last mentioned process, indeed, is familiarly known and appreciated in the nursery, where it is often resorted to by attendants upon children. When a child has been injured, or is otherwise suffering bodily pain, it usually runs to its mother or its nurse, who places it on her knee, presses it to her breast, applies her hand to the part affected, rubs it gently, and in many instances soothes the painful sensation, and *sets the child asleep*. This is Animal Magnetism in its most natural, although perhaps in its rudest form. "Magnetism," says an eminent magnetiser and practical writer on the subject—"Magnetism is as necessary to the young infant as the milk of its nurse. Nature has conferred the instinctive feeling of it upon all mothers; their caressing and affectionate hand, the gentle and genial warmth of their breast and their breath, their love so lively and so pure, form around the infant a magnetic atmosphere incessantly active, which constitutes the best rampart and the best remedy against the cause of those various diseases which are so frequently and so rapidly fatal at this tender age."

After alluding to certain other analogous processes, to several other influences noticed by authors, and to the subject of the more remarkable sympathies which have been found to exist between the different and even distant parts of the corporeal frame, and also between the mind and the material organism, Mr. C. proceeded to notice the development of another and most important element in Animal Magnetism, by directing attention to some very remarkable instances which have been recorded of the wonderful and apparently inexplicable power of human volition—of the will of man when energetically called into action—first over the corporeal organism of the individual who exerts it—and then, over that of others. Some instances of the former were quoted from "Isis Revelata;" and the lecturer shewed that the still more mysterious and incredible power which is said to enable one individual, by an energetic effort of his own volition, to produce very extraordinary effects upon the organism of another, had been maintained by a very numerous class of physicians and philosophers in ancient and modern times. Mr. C. then explained, from the writings of Pomponatius and Val Helmont, the proposition maintained by the authors alluded to, viz—that the will or imagination of man (the *voluntas imaginativa*—the imaginative will—as it is sometimes called), when energetically brought into action, is capable of producing certain perceptible effects upon other

living beings, even at considerable distances. Now, assuming for the present, the existence of the power in question, it appears quite natural that, when the fact had once been established, attempts should have been made to apply this influence to the cure of diseases. Indeed, as soon as it was discovered, that, by this means, remarkable changes could be produced upon the human organism, all analogy led to the presumption, that the same influence might be beneficially employed in modifying many of the morbid affections of the system. Accordingly, the principal object of almost all the writers to whom I have referred, is to demonstrate the vast efficacy of this asserted agent when applied to therapeutics. Pomponatius directly affirms that there are men endowed with the faculty of curing certain diseases, by means of an effluence or emanation, which the force of their imagination and their will energetically directs towards the patient; he observes that it is by no means inconceivable that health may be communicated to a sick person by this force of the imagination and of the will so directed; and he compares this susceptibility of health to the opposite susceptibility of the infection of disease. Since the time of Pomponatius indeed, some medical writers have spoken of a *healthy* as well as of a *morbid* contagion.

Van Helmont not only contended for the existence of this direct power of the imagination and the will—he asserts, further, that we can impress upon another body the virtue with which we are ourselves endowed, that we can thus communicate to it certain properties, and make use of it as an intermediate agent for producing the desired effects. He maintains, for example, that several vegetable remedies derive a peculiar efficacy from the imagination of the individual who gathers, prepares, or administers them; and this is quite consistent with the alleged experience of many of the modern professors of Animal Magnetism.

Having expounded the two principal elements which are supposed to be active in determining the efficacy of the magnetic processes, viz. the sanative influence of the touch of the hand, and the alleged power of human volition, when energetically exerted, in producing certain remarkable changes upon the organism of living beings, Mr. C. observed, that he did not, at present, call upon his auditors to believe these things, with whatever confidence and authority they may have been maintained. For these, said he, are asserted facts; and as every fact must be capable of being established by some adequate proofs of its reality, it only remains for us to examine the evidence which has been adduced in support of these assertions, and then to yield to the impression, favourable or unfavourable, which that evidence may produce upon our minds. But before proceeding to the inductive demonstration, Mr. C. proposed to take a short historical retrospect.

The lecturer then traced the general belief in the reality of the agencies in question, and their employment as sanative processes, in the history of the nations of antiquity. He alluded to the processes employed, and the effects produced in the Egyptian and Greek temples of health, to the temple-sleep, the prophetic dreams, and the cures alleged to have been performed by the manipulations of the priests. The *incubations* in the temples appear to have presented many characteristics of the phenomena which now so frequently occur during the magnetic sleep, or somnabulism; so that it seems extremely probable that the sanative instinct—occasionally developed by the processes of Animal Magnetism, and so conspicuously manifested in the higher degrees of the *sleep-waking* state—had been already discovered and put to practical use even in these early times.

Besides the *votive tablets* hung up in the temples, Mr. C. took notice of other ancient monuments, which seem to afford pretty conclusive evidence of an early knowledge of the magnetic processes. Among these are several hieroglyphic and emblematical representations of the Egyptians, which will be found delineated in the works of Montfaucon and Denon. Then we have the antique hands and fingers, which are considered, with some probability, as votive images intended to commemorate the cures performed by the hands of the priests. The fingers are always forefingers; and it is a singular fact, that among the Romans, the forefinger was occasionally denominated *medicus*, or the doctor.

Many allusions to the ancient magnetic practices occur in the works of

the Greek and Roman authors. The verses of Solon, preserved by Stobæus, are particularly remarkable:—

"The smallest hurts sometimes increase and rage
More than all art of physic can assuage;
Sometimes the fury of the worst disease
The hand by gentle stroking will appease."

Other allusions to the processes will be found in the works of Plautus, Tibullus, Martial, &c. Among the Oriental nations, the cure of diseases by the application of the hands appears to have prevailed from the earliest ages. It was practised by the Chaldean priests, the Indian Brahmins, and the Parsi; and it also obtained in China. A knowledge of the process was probably transmitted down from the heathen temples to the Christian monasteries.

After a short recapitulation, Mr. C. announced that in his next lecture he proposed to direct the attention of his audience to the modern progress of magnetic science, and especially to the highly important discoveries of Mesmer and his disciples.

A NEW AND VALUABLE DISCOVERY OF

A MEDICINAL SPRING,

Found at Greenford Place, near Harrow.

The circumstances under which this spring was first discovered may be stated in a few words.

In the summer of 1836, the proprietor happened to mention to a medical gentleman from town, who was paying him a friendly visit at the time, that although he had bored for water to a great depth, none could be found which was not so impregnated with saline matter, &c., as to be totally unfit for domestic purposes. It occurred to the medical gentleman that it might contain *medicinal* properties, and he recommended to the proprietor to have it analyzed.

This has been done by one of the first practical chemists in London; and from the analysis it will be seen, that it contains qualities of no common order, and not often found in a natural spring in this country; for, besides being a pleasant and grateful beverage, its properties as a saline aperient render it a valuable medicine, and its mode of operation is both mild and efficacious.

From the above statement, and from the subjoined analysis, it will be seen, that this water possesses properties which a long experience has proved to be very efficient in the cure of many diseases.

To those whose constitutions are impaired from a residence in warm climates, and to persons whose digestive powers are weakened by sedentary habits, close attention to business, or late hours, a course of this water will be found highly beneficial, by producing a salutary action on the various secretory and excretory functions.

Salts, &c., found in an imperial pint of the water, as analyzed by J. T. Cooper. Sen. Esq.

Cubic Inches.
- 4.5 Carbonic Acid.
- 1.0 Nitrogen.

Grains.
- 40.75 Sulphate of Magnesia.
- 24.76 Sulphate of Soda.
- 4.61 Chloride of Sodium.
- 2. 95 Chloride of Lime.
- 3.03 Carbonate of Lime.
- Hydriodate of Iodine, a trace.

ST. BARTHOLOMEW'S HOSPITAL.

Stricture—Abscess in Perineum and Prostate Gland—Effusion of Urine—Death.

Edward Walker, aged 59, admitted into St. Bartholomew's Hospital, November 5, 1836. He has suffered from stricture in the urethra for thirty years; has had difficulty in making water during the same period, and this difficulty was greatly increased, in consequence of which he applied to a medical gentleman, who made an attempt to pass an instrument without success; and he bled very much after the operation.

On the evening of the same day, he suffered great pain in the perineum, and could only pass a small quantity of water. He did not again seek medical advice. Two days previous to his admission, when another unsuccessful attempt was made to introduce an instrument, after which only a few drops of urine followed.

Saturday, November 5th, 9 o'clock A.M.—He now states that he has not made water for a week. There is considerable fulness of the perineum, with great pain of that part, and some pain of the scrotum. His countenance is expressive of great anxiety. Tongue covered with a dark brown dry fur; pulse quick, and small. An attempt was made to introduce a silver ca-

theter, which came away much blackened and discoloured, and about eight ounces of extremely fœtid urine followed the removal of the instrument. He was placed in a warm bath; in which he remained about twenty minutes, and obtained great relief. Mr. Earle saw him about one o'clock in the afternoon, and, after unsuccessfully attempting to introduce a catheter, he cut down upon the urethra through the perineum, with a double-edged scalpel, laying open the canal immediately behind the bulb. Some of the same fœtid urine slowly escaped. On attempting to pass a catheter through the wound into the bladder, it passed evidently out **of the canal of the urethra into a boggy undefined space, having bridles extending across it in all directions, and which gave the sensation** of cavity in which there was breaking down of cellular structure. With much difficulty, a gum-elastic catheter, without a stilette, was introduced into the bladder. This was retained in position by proper bandages. He takes a saline mixture with antimony.

7 P.M.—He expresses himself much relieved by the operation; healthy urine passes freely through the catheter; he complains of no pain; tongue moister, but still much furred.

6th.—Has slept well (the first sleep he has had for some days past); urine passes freely, both through and at the sides of the catheter, but he complains now of great pain in the scrotum and left groin. Fomentations ordered to these parts. Tongue remains as yesterday, as does the pulse. Bowels are freely opened.

7th.—Has had rigors at intervals, though he has continually dozed since yesterday. The catheter is removed from the wound, as the urine flows freely past it; the pain in the scrotum and groin has much subsided, though the scrotum is greatly enlarged and livid. A large diffused swelling, with considerable redness of the integuments covering it, was observed in the left lumbar region, extending down to the brim of the pelvis. A puncture was made into this with a lancet, and some bloody urine escaped; and minute punctures were also made into the scrotum. He was ordered to discontinue the antimony, the action of which was transferred from the skin to the bowels. Wine and brandy were ordered to be administered frequently, and fomentations to be applied to the loins and scrotum.

8th.—Urine continues to escape through the wounds in the perineum and loins. He lies in a comatose state, and is rapidly sinking.

He died on Wednesday the 9th, having been quite insensible during the last 24 hours.

On examination after death, the urine was found to have completely infiltrated the cellular tissue of the perineum and scrotum, the left groin, and to have extended upwards to the loins, and even to the axilla, on that side; but no urine was effused into the cavity of the abdomen or pelvis. The bladder **was much thickened**, and the mucous membrane in an ulcerated state. The prostrate gland was slightly enlarged, with an abscess in its substance. The urethra was much very diseased, the first four inches being the only part assuming at all a healthy appearance. There was great difficulty in following even the track of the remaining part, which appeared to have given way about the membranous or muscular portion. Opposite to this spot there existed an abscess in the perineum, communicating with the urethra, and also with that in the prostrate gland. It was also evident that several false passages had existed, one of which, after pursuing a course of about two inches, perforated the urethra again. The kidneys were healthy, but the ureters much dilated.

It would have been exceedingly interesting to have discovered whether the urethra was ruptured primarily, in consequence of ulceration commencing within its canal, or whether this was secondary to the prostatic and perineal abscesses. From the condition of the patient when he entered the hospital, and state of the parts after death, the solution of this difficulty was rendered impossible.—*Medical Gazette.*

Case of Aneurism.—Operation by John Hunter.

The dissection of a case, upon which John Hunter performed the high operation for popliteal aneurism, is now exciting a good deal of interest at St. Bartholomew's hospital. John Hunter had himself performed the operation upon the patient upwards of forty years ago!

ST. GEORGE'S HOSPITAL.

THURSDAY, MARCH 9.

THE only performance which took place this day was an amputation of the forearm, by Mr. Hawkins, for disease of the wrist.

This operation was dexterously executed; and we feel much pleasure in recording the occurrence, notwithstanding the sneers of a worthless contemporary, whose duty it is to pay homage at the shrine of those upon whom it depends for its existence. We have no hesitation in stating that the *non-lithotomy* case of Mr. Hawkins would have never graced the pages of Roderick's subscription journal did not the Lancet, by its correspondent, and we by our reporter, lay this extraordinary operation before the medical public.

LITHOTOMY AND LITHOTRIPSY.

LIKE most other Surgical Operations it is difficult for the members of the profession not only to discover the true *results* of Lithotomy and Lithotripsy—but to ascertain the *motives* which influence individuals in adopting the one or other of these modes of procedure.

By perusing the annexed Report of a case of Lithotomy at the North London Hospital, and Mr. Costello's remarks thereon, it is evident that neither the SIZE nor the HARDNESS of a stone is in the opinion of competent judges a reason for not employing Lithotripsy, and that an extremely improper and no less incorrect account is given in that report of Mr. Costello's opinion on this point. The fact is, that the most zealous opponents of Lithotripsy are individuals who have not the mechanical requisites to execute it, several excellent proofs of which may be seen in Calculi, preserved in the Pathological Collection of the NORTH LONDON HOSPITAL, where the operator not having been able to break down stones, had been obliged afterwards to remove them by the operation of Lithotomy.

All rational men must admit that the introduction of Lithotripsy is a most important addition to the art of Surgery, and the judicious practitioner will take the advantage of both operations in applying them to particular cases.

It is to be regretted, however, that whilst lithotomy is of comparative easy execution, lithotripsy requires a nicety in the mechanical details which can only be acquired by those who will bestow a great deal of time and practice in order to acquire the power to accomplish it.

NORTH LONDON HOSPITAL.

LITHOTOMY.

JOHN F., aged 17, was admitted, Feb. 2nd, under the care of Mr. Liston. Eight years since he had frequent pains at the extremity of the penis, which invariably followed bodily exertion, and was most severe after emptying the bladder. The symptoms at first attracted little attention, but they soon became more severe, with frequent desire to make water. They several times have disappeared for a period of six months, but were invariably brought on again by violent exercise. He did not apply for medical advice until three years since. He then refused to have a sound passed. Eight months ago he came to London, since which time the pain has been much increased, particularly after any exercise. The pain was most severe after complete evacuation of the bladder; he therefore always retained a small quantity of urine, which lessened his sufferings. The water frequently stopped suddenly in its passage. Of late the pain has been so excessive that his rest has been broken, and his health begins to suffer. In December last he was sounded, and a stone was detected, which Mr. Costello thought *too large and hard to be broken down.* The man then applied to Mr. Liston, who recommended its removal by the lateral operation; this was acceded to, and on the 3d of February the operation was performed.

Operation.—The patient having been placed on the table, and the stone detected, he was secured; the sound having been withdrawn, a staff with a deep groove along the side looking to the left of the patient, was introduced. The operator placed himself in front of the patient and passed his finger into the rectum to stimulate it to contract; the finger having been withdrawn, the staff was hooked under the arch of the pubis, and so held by an assistant, without any lateral inclination. Then with a knife, a little longer in the handle than a common dissecting scalpel, without a cutting edge, except about half an inch

from the point, the bladder was reached by the third incision, and the stone removed with great facility. It was of about the size of a walnut. Very little blood was lost, and the operation was completed *in about a minute.*

Sir—In the report of a case of lithotomy, in *The Lancet* it is stated that I had expressed an opinion, that the *size and hardness of the stone rendered lithotrity inapplicable.*

I have no intention of imputing blame to your reporter, who, in this matter, can only have written *what he had heard.* But it is nevertheless my duty to correct an error, which, though involuntary on his part, would very much misrepresent *my opinions* on this point.

The patient, Mr. E., was placed under my care, by Mr. Latters in January. I sounded him with the utmost gentleness, (for when the urethra is highly sensitive, as it was in this instance, to introduce an instrument rapidly is mere gratuitous cruelty), and ascertained that the bladder contained a stone of some siz, which rendered a clear sound on being struck with the catheter.

I directed soothing treatment to be persevered in for ten days, and requested Mr. Latters to blunt the sensibility of the canal, by the introduction of a bougie, every second day, allowing it to remain for ten minutes. I encouraged the patient to look forward to a speedy deliverance, *either by lithotomy, or lithotrity,* but deferred making any preference of one to the other, until the parts should be restored to comparative quietude. I was duly apprised of his intention, and he had my hearty concurrence in the course he adopted of getting admittance in the hospital, to which he was prompted chiefly by the inconvenience attending the operation.

As a general method, my opinion has *not been unfavourable* to the application of lithotrity in children, or even in youths, before puberty. It is also well known, that I have frequently *refused to operate* in cases of adults, though tempted by the offer of large fees; but my objections in these cases were not grounded on the mere *size, or hardness, of the stone,* but on the contra-indications furnished by the general state of the patient, which either forbade the operation peremptorily or rendered the chances of success too uncertain to allow me to commit to them the credit, both of the operator and the operation.

To object to the application of lithotrity, on account of the *size and hardness of the stone,* without any other forbidding circumstance, would look like affectation in me, to whom belongs the merit of having reduced, by lithotrity, in the case of Mr. John Laughland, of Kilmarnock, the largest concretion that has hitherto been safely removed from the bladder. This was a solitary stone, of lithate of ammonia; it was excessively hard, weighed seven ounces, one drachm, and must have formed a mass, pretty nearly equal in size to that of a turkey-egg. His townsman, Dr. M'Christie, and many others, were present at the sittings in this most remarkable case.

I beg respectfully *to deny that my opinion is such as it is stated in the report.* I might even go much farther, but I must now refrain, as I shall submit certain propositions to the *Westminster Medical Society,* on Saturday, the 18th instant, which will dispose of this point, finally. I purpose, on that occasion, to exhibit an instrument which, while it carries the sphere of this interesting operation far beyond its present limits, will consolidate the footing it has already obtained, put an end to those distressing accidents, another of which, I am informed, has just occurred in private practice, and accelerate, in an extraordinary degree, the labour of the manœuvre, and the deliverance of the patient. I have the honour to be, &c.,

W. B. Costello.

38, Bruton-street, Berkeley-square,
March 7th, 1837.

ILLNESS OF MR. WAKLEY, M.P.

We regret to state that Mr. Wakley has experienced a relapse of inflammatory sore throat, which required the removal of a portion of the uvula on Tuesday last. He has been ordered to leave town for the benefit of his native air in Devonshire.

BOOK FOR REVIEW.

The Address of the President of the British Medical Association, adopted at a General Meeting of the Profession, held at Exeter Hall, Jauuary 19th, 1837, with a Short Account of the Origin of the Society, and a List of the Officers and Council.

London:—Churchill.

PIN SWALLOWING.

TWO INTERESTING CASES.

Two remarkable cases of this kind I have had an opportunity of seeing weekly, for twelve months. The first occurred at Manchester; the second was in St. Bartholomew's Hospital, under the auspices of Mr. ————, and both individuals belonged to that class of society called manteaumakers. All the ladies engaged in this avocation carry about them an abundant supply of pins, which for the most part are folded up in a piece of blue paper, which is carefully deposited "in the bosom!" and here they inoffensively remain, ready for use at a moment's warning. When a dress is to be pinned on, a curtain pinned up, or any other operation of this kind to be performed, the lady takes from her bosom the packet, and deliberately puts a pinch of pins in her mouth, this organ serving as a temporary kind of pin-case until the business is over. The lady of St. Bartholomew's had a packet of pins in her left bosom, and was quietly walking along Holborn, when a rude drunken beast, belonging to the class of society called coal heavers, rushed violently against her, and with such force as to drive the contents of the package into the left bosom; a good deal of hæmorrhage immediately set in, a professional gentleman removed a few of the pins, but was obliged to leave the greater quantity in the organ, they had entered so deeply. In a few months after she was admitted into the hospital. A cicatrix existed upon the surface of the left mamma, at the point of entrance, also the cicatrices of three or four incisions upon the upper part of the arm, and as many more upon the left side of the trunk, and upon the upper and posterior part of the left lower extremity. During her stay in the hospital, whenever a pin was about coming to the surface, a slight degree of redness of the integuments always preceded, and pain was felt in the spot, particularly upon handling it; with the greatest certainty of finding a pin, an incision would then be made, and the pin found four or five lines from the surface, which was readily removed with a forceps. Before she left the hospital as many as twenty pins had been altogether removed, and that which was last removed, invariably made its appearance at a greater distance from the seat of the injury than the one which preceded it. Thus the last pins removed were from the dorsum of the left thumb, and the anterior part of the left ankle. In their course they invariably followed the intermuscular cellular intervals, and confined their route to the left side of the body, never passing the *median cellular boundary*.

In the other case the individual was pinning up some bed curtains previous to finishing them, and this operation requiring more hands than one pair, some of the servants volunteered their services, and amongst the rest a smart dapper footman. This gentleman's attention being more directed to the shape and figure of the principal, who was standing on a high stool with her mouth full of pins, than to any use he was present for, gently commenced paying his devoirs by giving a portion of her gluteous maximus (which was in the most inviting position for such an operation) a smart embrace between the finger and thumb of his right hand. She started, her foot slipped, her ancle was strained, but, what was of more serious consequence, she swallowed the pins! The poor girl suffered great pain and fright—a medical man was immediately sent for, who removed as many pins as he could from the bag of the pharynx. She was admitted into hospital. Several pins in addition were brought away; and she left, in about two months, in the full conviction that at least two dozen pins were distributed in various parts of her body. For a year afterwards she was a constant visiter at hospital, to have pins removed from various parts of her body. Unlike the first case, the pins followed no regular boundary, which is to be accounted for by their entering the bag of the pharynx in every direction.

QUACKERY.

Some of the stratagems resorted to by needy empirics to get into practice are very ingenious, and many a regular physician has been obliged to have recourse to similar artifices to procure employment. It is related of a Parisian physician, that, on his first arrival in the capital, he was in the habit of sending his servant in a carriage, about day-break, to rap at the doors of the principal mansions, to inquire for his master, as he was sent for to repair instantly to such and such a prince, who was dying. The drowsy porter naturally replied with much ill-humour,

"That he knew nothing of his master." "What! did he not pass the night in this house?" replied the footman, apparently astonished. "No," gruffly answered the Swiss; "there's nobody ill here." Then I must have mistaken the house. Is not this the hotel of the Duke of ———?" "No. Go to the devil!" exclaimed the porter, closing the ponderous gates. From this house his valet then proceeded from street to street, alarming the whole neighbourhood with his loud rap. Of course, nothing else was spoken of in the porter's lodge, the grocer's shop, and the servants' hall for nine days. Another quack, upon arrival in a town, announced himself by sending the bellman round, offering fifty guineas reward for a poodle belonging to Dr. ———, physician to his majesty and the royal family, professor of medicine, and surgeon-general, who had put up at such and such an inn. Of course, the physician of a king, who could give fifty guineas for a lost dog, could not but be a man of eminence in his profession.—*Millingen's Curiosities of Medical Experience.*

SCENE 1ST.

NORTH LONDON HOSPITAL.

Time, 1 o'Clock, P.M.

Patient.—Sir, there is no necessity to *probe me*; it gives me great pain—and I have just left St. George's Hospital, where I was under the care of Sir Benjamin Brodie, who *never* probed me.

Operator.—Hold your tongue, Sir; Sir Benjamin Brodie be d—d; what does *he* know about the business? [*turning to the assembled pupils*]. They do very queer things at St. George's, gentlemen.

A Pupil.—Aye! and at the North London too!

[*Exeunt omnes.*]

(To be continued.)

TO CORRESPONDENTS.

PODAGRA. The paroxysm is confined to the toes, so that there is no arthritic humour within the cranium. Patients are seen at the bed side on paying the usual fee—but the footman's son may be consulted at half price.

MR. GEORGE'S communication has been received.

NORTH LONDON STUDENT. We regret that we cannot give the exact proportions of the *Berlin dye.* We believe that both this and the *argentum nitratum* are employed by Professors, so that their comparative merits can be readily distinguished by actual inspection. The experiments which have been made with both dyes in the dissecting room, prove that neither of them have any action on dead matter, therefore in the experimen alluded to by correspondent, the hair of the wig must have originally been of a *dark black* colour.

CORPUS CALLOSUM. The *reflexmotory system,* we have every reason to believe, is not likely again to have any influence at Aldersgate-street. The nervous tract is not likely to be traced beyond Blenheim-street, where the demonstrations of the reflex-motory power, did not prove, we regret to say, *attractive.*

JUVENIS. If the author be acquainted with Dr. Hope, we would strenuously advise him to apply to him for an appropriate dedication. His dedication to the medical staff of St. George's, being universally admitted to be a most admirable specimen of dedication writing.

ANTI-APOSTATE. We cannot undertake to point out any particular improvement, far less a discovery of Mr. Lawrence's. All he has written must be considered as mere *compilations.* He may be a sound practitioner, but has no claim to originality. His real political opinions can be best gathered from his printed speeches and contributions in the *Lancet.*

BERZELIUS is referred to our leading article of this day. No diplomatist has yet been sent down to Edinburgh. Several communications have been made by letter to the quarters alluded to.

ERRATA.

No. 265.—Page 783, column 1, line 19, for "*perfectly* changing," read "*perpetually* changing." Page 784, column 2, line 26, for "aperture in the decidua, and the inner surface"; read "aperture in the decidua. 3. *The semen may creep between the decidua* and the inner surface of the uterus." Line 21 from the bottom, for "*all* the third week," read "*at* the third week."

All communications and books for review to be forwarded, carriage paid, to Dr. RYAN, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

THE

London Medical and Surgical Journal.

No. XL. SATURDAY, MARCH 25. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XV.

Sensation.

Conducting Power of Metals for Sound —Conduction of Sound through the Tympanum—Cathedral and Concert Rooms—Effect of Carpets and Curtains—Reflected Sound—Explanation of Echoes—Construction of Sounding Boards, Speaking Trumpets, and Ear Trumpets—Analogy between Tones and Colours—Difference between Tone and Intensity of Sound—Explanation of Octaves, Fifths, Fourths, and Major and Minor Thirds—Three different Methods of producing an Octave —Connection between Hearing and the Passions—Signs of Timidity in the Horse—Acute and Dull Sounds —Cause of Deafness after Loud Sounds—Eustachian Tube; Meatus Externus; Fenestra Ovalis; Fenestra Rotunda—Construction of the Ear in Fishes—List of Musical Tones which harmonize with each other— A Musical Ear—True and False Theories—Anecdote of Beethoven— —Sense of Taste—Nerves which impart it—Lips of the Snail—Tongue of the Scorpion—Salivary Gland of the Cuttle Fish—Hollow Tooth of the Spider—Web of the Spider—Thread of the Silk Worm—Poison—Glands of Serpents—Manner in which they inflict a Wound—Tongue of the Bee —Analogy between the Papillæ of the Tongue and Teeth — Animals which have Teeth and Feathers on the Tongue—Cloven Tongue of the Serpents — Oily Tongue of the Whale—Long Tongue of the Chameleon—Prehensile Tongue of the Giraffe—Worm in the Dog's Tongue — Electrical Experiment with the Tongue — Diminution of Taste by Stopping the Nostrils — Sense of Touch — Colour of the Skin — Man originally Black—Eve a Black Baboon—Observations of Hunter, Pritchard, Blumenbach, and Gedi—Dermis, Corpus Mucosum, and Epidermis—Nails do not Grow—Analogy between Hairs and Horns—Effect of Castrating Stags—Sudden Blanching and Blackening of the Hair and Skin —Lotion for Whitening the Skin—A Piebald Negro — Albinos—Composition for Blackening the Hair—The Cuticle Permeable, but not Porous— Organs of Touch in different Animals—Best Colour for a Philosopher's Dress, and a Fruit Wall.

It was ascertained, by means of a long tube, that solid metal conducted sound ten times as rapidly as air. Sound is conveyed through the tympanum, not by the air it contains, but by the auditory bones. If the former conducted as well as the latter, we should have an echo to every sound, from the difference of time taken in its transmission by the air and the solid matter. Music is, in general, far better in a room, which has no curtains or carpet, and when there are few people present. Sometimes, however, the sounds are apt to jar in these circumstances; to prevent which, cathedrals are sometimes hung with curtains.

We seem to refer a reflected sound to the *distal* extremity of the ray which conveys it; and we think the body

which produces the sound, is just the same distance *beyond* the reflecting body, as it is in reality *before* it, because the sound takes just the same time to reach the ear. This is the explanation of the direction to which we refer the origin of the sounds which produce echoes. In order to produce a good echo, we must have a concave surface; so that there may be a collection and concentration of the rays of sound on the ear. A flat surface returns too few of these rays; and hence the rarity of good natural echoes. Hence, in the construction of sounding boards for pulpits, a curved form is the best. These principles are likewise to be borne in mind, in the construction of speaking-trumpets, ear-trumpets, and other acoustic instruments. In all these cases, probably as much depends on the *condensation* of air, as on the *reflection.*

Tone is different from intensity. Tones are analogous to colours, and depend on the *rapidity* of the vibrations; while intensity depends on their *number.* An octave above another, is just twice the number of vibrations. If we suppose F to have *sixty* vibrations, an octave above will have *a hundred and twenty;* a fifth above, will have *ninety;* a fourth, *eighty;* a *major* third, seventy-*five;* a *minor* third, seventy-*two.* A string of the same *length*, but twice the *thickness* of another, will give a sound an octave higher than the latter. So will a string of the *same thickness*, but *twice* the *length*, or a string of the *same length and thickness*, but four times the *weights.*

How can tones, resulting from *thirty-two* vibrations in a second (the lowest appreciable bass note), co-exist, in the same air, with tones resulting from *thousands* of vibrations in a sound? The explanation seems to be, that different tones call into motion different sets of particles. Fear and weakness seem to have a greater connection with the sense of hearing than with any other of the senses. For instance, we can have no confidence in a horse, if his ears are much in motion. The *pinna* is wanting in fishes, because the vibrations of the water are so strong as not to require one. After listening to a dull sound, the hearing is very acute, because the muscles of hearing are on the stretch; and the temporary deafness which is experienced after a loud sound, is from a contrary state of the muscles. These phenomena are analogous to the effects of a bright or a dull light upon the eye.

The size of the Eustachian tube and that of the external *meatus auditorius*, are in the inverse ratio to each other. Many fishes have a chain of bones in the cervical vertebræ, communicating with the vestibule of the ear, and with the swimming bladder. These fishes hear by means of tremors, conveyed to the ear in the swimming bladder, through the pharynx. In the human ear, ossification of the *fenestra rotunda* entails certain deafness, but that of the *fenestra ovalis* does not.

The vibrations which harmonize with each other, are those which bear the following proportion:—1. Two to one (an *octave).* 2. Three to two (a *fifth).* 3. Four to three (*a fourth).* 4. Five to four (a *major* third). 5. Six to five (a *minor* third.) A musical ear does not depend on the perfection of the auditory apparatus, but on the capability of the mind to be acted on by music. It is not mere perception. Willis attributed it to softness of the auditory nerves; but this has never been observed in persons who have been remarkable for a musical ear. It was attributed by another author to a want of aptitude, or of correspondence between the two ears; but this would cause a sort of double hearing, analogous to squinting. Everard Home says, it depends on muscularity of the *membrana tympani*, but the *membrana tympani* is *not* muscular. Beethoven, when almost deaf, still enjoyed the *pianoforte;* and I once saw the same thing in a celebrated composer. The rays of sound do not proceed in straight lines *only;* though their greatest effect is in that direction. They diffuse themselves, though unequally, in *every* direction.

IV. *Sense of Tasting.*—This sense resides, in some degree, in all parts of the mouth The nerve which imparts this sense, is the *third* branch of the *fifth* pair (the *inferior* maxillary). As this is the nerve which conveys *general* sensibility to other parts, too great a stimulus excites pain. The palate enjoys taste through the medium of the *second* branch of the fifth pair (the *superior* maxillary).

In the lower animals, the mouth and the stomach often form one cavity. The snail, however, has regular lips.

The tongue of scorpions and insects are tubular prolongations of the inferior lip; and are often furnished with a sucking apparatus. Many of the *invertebrata*, such as the snail and the *sepia*, have distinct salivary glands. The web of a spider is squeezed through a hollow tooth, in the same way as the venom of serpents, &c. It consists of coagulated mucus, and is secreted from a gland near the anus; but the thread of a silk-worm is from the salivary glands. The *cetacea* have no salivary glands. They are best developed in the *herbivora*. In many serpents, there is a poison-gland behind each orbit. Into this gland the hollow tooth is pulled by muscles; and serves both to inflict the wound, and as a duct for the poison at the same time.

The nervous ring which surrounds the gullet in the lowest animals, is analagous to the third branch of the fifth pair (the inferior maxillary), being subservient to deglutition. The *sensific* portion of this nerve enables us to ascertain what we eat; and the *motific* portion enables us to masticate it. In the bee the tongue is rolled into a sucking cylinder, inside the proboscis. There are very few animals which have both a tongue and tentacula. As we advance in the animal scale, the papillæ of the tongue gradually become transformed into teeth. In the lamprey there are actually teeth on the tongue. In fact, the teeth are ossified papillæ.

The tongue is cloven in serpents; which indicates that it is rudimentary, or imperfectly organized. The tongue of the chameleon is very long. In the toucan the tongue is beset with feathers. The tongue of the whale will sometimes yield three or four barrels of oil. The *worm* (as it is called) in the tongue of the dog and other animals, is only a strong elastic string of cartilage under the tongue. In the giraffe, the tongue is an organ of prehension; with which it pulls down leaves and twigs. If we touch the tongue with two metals, the *more* oxidizable of them imparts an *acid* taste; and the *less* oxidizable, an *alkaline* one, corresponding to positive and negative electricity. These results would seem to depend on the actual presence of acids and alkalies, developed by the decomposition of the salt in the saliva.

Taste does not differ more from touch than one kind of touch does from another—that is, than *touch* does from *tact*; the difference between which is, that in the former the papillæ of the skin are *erect*, while in the latter they are *flaccid*. It is not easy to understand why taste should be diminished by stopping the current of air through the nostrils. It is, perhaps, by compressing the nerves, so as partially to paralyze their filaments. It is owing to the stoppage of the current of air through the nostrils, that the last gulp only of a full draught excites taste.

V. *Sense of Touching.*—The *pellicle* of the *crustacea*, and the *cloak* of the *testacea*, are probably analagous to the dermoid tissue. Many philosophers have imagined that man was originally *black*, and that some of the race have become *white* from the operation of various causes; and this opinion is supported by such strong arguments by Hunter, Pritchard, and others, that it is not easy to disbelieve it. According to this account, Eve must have been little better than a black baboon. Blumenbach, however, maintains that men were originally white. Pritchard says, that in the progress of civilization, animals always change from dark to *lighter* colours. The variety of the human race to which he gives the name of the *melanic*, is very numerous; including all Blumenbach's varieties, except the Circassian. In the *melanic* variety, the skin varies from deep black to a light shade of red or yellow. Pritchard has two other varieties—the *albinœs*, which are white, and the *zanthous* variety, which is intermediate between the two others. It was thought by Gedi, that a white skin is an indication of the intimate union of the elements, which constitute the perfection of organization. Indeed, he seems to think that if our organization were perfect, we should be as white as a sheet of paper.

"Baynini's membrane" is thought by some to intervene between the cuticle and the *corpus mucosum*. He found it between the pustules of persons dying of the small pox, and it was probably coagulable lymph. To differences in the corpus mucosum, all the varieties of coverings in different animals are to be ascribed. They have a dermis and a cuticle beside.

Hairs, nails, &c. are derived from the *corpus mucosum*. Nails cannot properly be said to *grow*. They are protruded by new matter at their base. We only speak of *growth* in *organized* bodies. We might as well speak of *mucus*

growing, as of nails. Horns appear to be ravelled hairs. They are organized only in the stag and the giraffe, being composed of *phosphate* of lime. The horns of all other animals are *inorganic*, consisting of *carbonate* of lime. Castration of stags prevents the growth of their horns.

The hair of the negro is of much the same colour all over the body. Numerous instances are on record, of the hair suddenly becoming blanched from emotions of the mind, in pregnancy, &c. This phenomenon was often noticed during the French Revolution. Instances are also related of the *skin* becoming suddenly blanched or blackened. Such facts are to be attributed to a sudden great increase of absorption and deposition. Some cases are mentioned of *blanched* hair becoming *coloured*. Sir Everard Home says that blanching, in old age, begins as it were at the circumference of the body. The change of colour in the chameleon is an example of a sudden change in the *corpus mucosum*, from emotions of the mind. A solution of chlorine will blanch the skin for a time; and in that way Beddoes used to amuse himself by making a negro *piebald*. Blumenbach has seen as many as sixteen *albinos* in Germany. A mixture of chalk, lime, litharge, and water, will turn the hair black for a time, by coating its surface with sulphuret of lead. The colour turns *blue*, if the application be not constantly renewed.*

The cuticle is *permeable*, but not *porous*. Luwenhoek described pores in it, of which a *hundred and twenty-five thousand* could be covered by a grain of sand. Humboldt, however, with a much more powerful microscope, could not see them. Instances are related in which, owing to violent emotion, almost the whole of the cuticle was suddenly thrown off. Gooch details the case of a man, who threw off many parts of the cuticle. Here is the representation of a *glove of cuticle*, which he often threw off. These cases are clearly analogous to those of serpents and lizards, in which the skin is periodically renewed.

The organs of touch are those in which the papillæ of the dermoid tissue are most abundant. 1. In reptiles, the organs of touch are the soles of the feet; and the papillæ are most numerous there. 2. In the *invertebrata* and fishes, *tentacula*, *antennæ*, and *palpi*, are the organs of touch. 3. In birds and the ornithorinchus,—the bill. 4. In the *feræ*,—the whiskers. Carus affirms, that in man, the whiskers are *antennæ*. 5. In the mole, the hog, and the elephant,—the snout. 6. In the bat,—the wings. 7. In the *rodentia*, in apes, and in man,—the fingers.

The bat distends the subcutaneous cellular tissue, in order to increase the lightness of its body. There is no fat under the skin in the *invertebrata*, in fishes or in reptiles. The nature of the subcutaneous fat varies in different animals; being either tallow, lard, or blubber. In the *cetacea*, there is a very abundant oily exudation; but no follicles are visible. The cuticle which surrounds a hair, dips down to the bulb of the latter through the *dermis;* and is then reflected on the hair. Hence the disease called *plica Polonica* is an affection of the *epidermis* of the hairs.

The sense of touch is less liable to be deceived than the other senses, the stimuli to which are more subtle. Below the class of reptiles, there is no distinction between *touch* and *tact;* for there are no papillæ. Touch, properly speaking, seems to be confined to the fingers. Hence the hand is styled by Aristotle, "the organ of organs." Helvetius, Buffon, and others, have thought that man is indebted to the hand for his intellectual superiority; the sense of touch being the only one in which he is superior to all other animals; and sensation being the avenue to all knowledge. But Celsus remarked, that the hand was not the *cause* of his superiority; but *because* of his superiority the hand was given, as he would know how to make use of it.

Sebaceous secretions from the *medusa* and other animals are probably the cause of luminous waters. In the toad, these secretions are somewhat poisonous. In lizards, they are sometimes very acrid, so as to blister the hands of those who handle them; and one kind of lizard (the salamander) has secretions so abundant, as to put out a fire if thrown into it. The tip of a dog's nose, which is his organ of touch, is bedewed with moisture, in a state of health. Fishes, which do not perspire, have very large kidneys. Sanctorius lived in

* The Edinburgh students had an excellent opportunity of witnessing this phenomenon, in the party-coloured hair of the late Sir John Leslie,

a statical chair for thirty years; and then published his observations in the shape of aphorisms.

The dark colour of the skin does bear some *relation* to the heat of the climate, but it does not *depend* on it, for we have every variety of colour in the same latitude. Whole tribes which have been transplanted from one climate to another, and have undergone no change for ages, and if they *had* acquired a different hue, acquired varieties of any other kind are not transmitted to offspring. A dark colour cannot be given for the purpose of resisting heat, for black is the hottest of all colours, and it is only in that way it could prove a curse. Dr. Hope* says the dress of a *philosopher* is the most *unphilosophical* possible, for black is the *hottest* colour in *summer*, (being the best absorber,) and the *coldest* in *winter* (being the best radiator.) Dr. Home, on the other hand, denies this. He says an arm is blistered if exposed to the fire covered with a *white* cloth sooner than if covered with a *black* one; and explains it by alleging that black *absorbs* heat most rapidly, but does not *transmit* it.† But if this were correct, black-coloured cloth would not melt snow sooner than other colours. Fruit ripens best on a black-coloured wall.

OBSERVATIONS ON CRIMINAL ABORTION.

(Continued from page 885.)

Savine is a common remedy employed by midwives and quacks, to produce abortion. In large doses, it is a powerful poison. Orfila destroyed dogs with it in thirteen and sixteen hours.‡ Foderè relates a case of a young woman who took it in wine from the hands of her seducer. She immediately felt a burning heat, accompanied by hiccup and vomiting. Fever succeeded, and continued for fourteen days; which was cured by ordinary remedies, and at the end of two months she was delivered of a healthful infant.§

Pennyroyal and rue are given by midwives for the same purpose. They seldom succeed, and usually induce abdominal inflammation, which destroys the woman. I have been repeatedly consulted in cases in which these remedies have been employed, without inducing the desired effect, and on the grounds of causing the return of the catamenia; but there was no difficulty in detecting pregnancy.

Mercury was at one time considered an abortive, but was soon found to be useless. Mathiolus states that he knew several women, each of whom took a pound of quicksilver to induce abortion, and without any bad effect,* and Fernelius attests the fact.

I have known a case of a woman who was destroyed by an injection of oil of turpentine into the vagina. She did not abort, but died of hysteritis.

It was also supposed that the use of the preparations of mercury continued to salivation, would cause abortion; but modern observation refutes this opinion. The mechanical means of procuring abortion are blows on the abdomen or loins, or sharp instruments introduced into the orifice or substance of the uterus. The former are inflicted by profligate and brutal men, the latter by midwives, farriers, and empirics.

It rarely happens that women, who have received severe contusions on the abdomen or loins by blows or falls, arrive at the end of pregnancy, for they generally abort, or have premature labour. Dr. Smith relates the case of a woman, whose husband attempted to induce abortion by elbowing her in bed, rolling over her, &c., in which he succeeded in not only effecting his purpose, but in killing his wife, for which he was executed at Stafford, in 1811. Belloc relates two similar cases. Abortion does not, however, invariably follow such injuries, unless great violence has been used. Women often present themselves at our hospitals and dispensaries, who have received blows on the abdomen, but by proper treatment abortion may be prevented. Belloc mentions a case in point. It was that of a woman four months pregnant, who was struck by her husband. She did not apply for medical advice, or go to bed, or use any preventive of abortion. She walked a league on the day on which she had been struck, and a quarter of a league the next. She

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* Professor of Chemistry in the University of Edinburgh,

† Professor of the Practice of Physic in the same University,

‡ Vol. 2. § Vol. 4.

* James's Dispensatory.

aborted. Belloc decided that had she used proper remedies abortion might not have happened.

In giving testimony in cases of this kind, we ought to determine, 1. Was the violence alone sufficient to produce abortion? 2. Was the woman predisposed to this disease? and, 3, Were proper preventive means employed? If the second question were answered in the affirmative, and the third in the negative, and if it were proved that the person who inflicted the wound was not aware that the woman was pregnant, he would, according to the law of this country, be acquitted of murder, and would be allowed his liberty on giving bail for his appearance at the final trial.

The mechanical means used to destroy the fœtus, are sharp instruments passed into the uterus. These are employed by midwives and quacks. A man-midwife was tried at the Durham assizes, in 1781, for having killed a pregnant woman and her infant, by perforating the womb with pieces of wood. On examining the womb, there were two apertures, which, according to evidence, were made by the wooden skewers, one of which was mortified and the other inflamed. Additional signs of injury were also discovered.* A man, who styled himself a surgeon, was tried at the Old Bailey, in 1829, for a like offence. It was found that he had passed a steel or iron sound through the uterus, but the aperture was not inflamed or gangrenous. It was effected after the woman had taken various abortives from a widwife, which had induced enteritis, of which the patient was dying when the puncture was made. The woman died without having aborted, and the prisoner was acquitted, on the grounds that enteritis was the cause of death, and that it existed before he had seen the deceased.

It appears from the preceding facts, that accessaries and accomplices incur the responsibility of endangering or destroying the life of the woman and her infant, and thus murdering two persons.

We may also conclude, 1. that all abortive means are uncertain in their effects upon the fœtus; 2. that they always destroy the life of the mother, and in some cases the infant is born alive.

* East's Crown Law, vol. i. Smith's Legal Medicine.

In judicial investigations relative to abortion, the medical witness is called on to decide the following questions:—1. Has there been abortion produced?—2. Was it natural or provoked?—3. Has the fœtus quickened?

In reply to the first question, has there been abortion produced? we cannot give a positive answer unless we see the fœtus or ovum, as all the symptoms of pregnancy may be caused by Molesor hydatids in the uterus. We have first to determine whether the substance presented to us is a fœtus or mole.

We should also examine the age of the fœtus and compare it with the signs (if any) detected on examination of the mother; and then learn, if possible, what has been the cause of the miscarriage. It is to be remembered that nothing can be learned as to the cause from the appearance of the fœtus, which presents the same appearances in voluntary and involuntary abortions, unless it be wounded by mechanical violence.

We have next to ascertain the age of the fœtus, with a view to reply to the third question—has it quickened?

Examination of the embryo or fœtus.—During the first two months of utero-gestation, we must be extremely cautious, and take care not to confound the fœtus with a mole or false conception, or with a sanguineous concretion or false mole. At this period, the embryo is enveloped in a capsule, formed by two membranes (the chorion and the amnios), united to a spongy mass (the placenta), more voluminous than itself. The first of these membranes is generally torn, and allows the second to escape in the form of a membranous sac, to which is attached a clot of blood. On opening this sac, a quantity of whitish fluid escapes, and the embryo will be found in an organized condition. It is a gross mistake in many works on obstetrics, in which it is stated that the fœtus cannot be recognized at this period. I have preparations which shew it perfectly formed at two months and a half. We seldom see the substance expelled in early abortions, as it is generally destroyed by the female attendants; and every obstetrician must have been embarrassed by this circumstance, and must have seen cases of supposed abortion, in which the expelled substance was a clot of blood. Hence the necessity of wash-

ing such substance, when any doubt exists, in order to determine whether it be blood, a mole, or a real conception. We should also remember the frequency of catamenial obstruction for two or three months, and how often women suppose themselves pregnant when they are not so. In such cases the want of coagulation in the menstrual fluid proves it not to be blood. In the cases before us, it is absolutely necessary to know the appearances of the fœtus at the different periods of gestation. The embryo is visible at the fifteenth day (Meckel), and the ovum is six or eight lines in diameter. It is piriform, elongated, curved, round, enlarged at one extremity, which is the head, and attached to the membrane at the other extremity, having a white cord, which is the spinal marrow (Velpeau). Towards the end of the *first* month, the extremities begin to appear in the form of round tubercles, and the umbilical cord is seen attached to the intestine; the liver is large and nearly fills the abdomen. In the course of the *second* month, the head is equal in size to nearly half the body; the eyes are seen as two black spots; the nose, nostrils, and the ears are formed; the arms and legs begin to appear; the toes and fingers are distinctly observable; there are many points of ossification in the frontal and maxillary bones, the clavicles, ribs, and os ilium. The rest of the osseous system is in a state of cartilage. The penis and clitoris project, and the sex may be determined. The embryo is little less than two inches long, and weighs nearly an ounce.

At three months, the fœtus is about four inches long, and weighs nearly three ounces. It is impossible to mistake it at this period, and therefore I need not describe its subsequent developement.

Examination of the Mother.—It is extremely difficult in the first three months of pregnancy to determine whether abortion has or has not occurred. The embryo is but slightly attached to the womb at this period, and its existence cannot be positively proved at this age, unless by auscultation, which, even made by the ablest practitioner, is often unsatisfactory. When expelled it scarcely leaves, even in the uterus, during the first month, any traces of its previous existence. The uterine vessels are as yet but very slightly enlarged, and will so readily contract as to prevent effusion of blood. Ablution may be applied, and remove all traces of blood. In abortions between the second and third month, there is generally some sanguineous or lochial discharge, after the expulsion of the embryo from the vagina, and this canal is tender on pressure; the orifice of the womb is generally so dilated that it often admits the tip of the finger, the external labia are hot or tender, and in some cases the capillary of growth is matted with coagulated blood. These signs are very evident when abortion occurs after the fourth month, and are still more remarkable if the pregnancy has arrived at the sixth or seventh month. It is easy to distinguish between the menstrual fluid and blood—the first does not coagulate in its normal condition, though when the uterus is congested during its discharge, we occasionally observe small coagula in it. I speak from considerable experience, when I state that the want of coagula in in the catamenial fluid, has often led me to declare that the patient's had not aborted, but had suffered from suppressed menstruation. It is also to be recollected that the menstrual evacuation seldom continues in a healthful individual longer than three or four days, though it sometimes does for ten or twelve; but in early abortions, when the embryo is expelled, and the placenta or any portion of membranes retained, there may be loss of blood for one or several weeks. But it is the general opinion of practical obstetricians, that when the embryo and its appendages are expelled in abortions, during the first two months, by a primiparous woman, there is no possibility of ascertaining by any sign presented by vaginal or uterine examination, whether abortion has happened or not.* Dr. Montgomery attended a lady, who aborted with little or no pain, but with considerable hæmorrhage at the close of the second month; and in twenty-four hours afterwards he found the os and cervix uteri almost completely restored to their natural condition, the vagina and external genital

* Avant les deux premiers mois revolu de la grossesse surtout lorsqu' il ne s'agit pas d'une primipare, l'art ne presente aucum moyen concluant de determiner par l'examen de la femme si un avortement a eu lieu. Marc. Dict. de Med. Vol. iii.

fissure scarcely if at all dilated, and very slightly relaxed; the breasts exhibited very imperfectly the appearances which accompany pregnancy, and the ordinary sympathetic affections of which were absent. Now in such a case as this it would be utterly impossible to arrive at more than a very ill-established probability, except by finding the ovum, which in this case was expelled entire and perfect, in which state he has preserved it.*

This obscurity, however, does not attend abortions at the middle period of pregnancy, and much less premature labours from the seventh month upwards. In both cases, if the woman is examined in a few days after abortion or premature labour, for example, from the first to the fifth day, and in the latter to the ninth day, there will be lochial discharge; the os uteri will be more or less dilated, the vagina enlarged, the external genitals more or less tumefied, the breasts are swollen, the milk often secreted, the areolæ round the nipples larger and darker than in the unimpregnated condition, and the abdomen is flaccid, ruguous, or pendulous. These signs are more or less evident in different cases. Thus Dr. Montgomery examined a woman five days after delivery at the full time, and was astonished to find the parts so nearly reduced to their natural condition, "especially the os and cervix uteri, which had hardly differed from their natural unimpregnated form and size."† The signs of delivery at the full time may totally disappear in eight days, according to Boudeloque, Fodere, Marc, Bohn, Albert, Petit, Louis, and others. The last four physicians declared a woman accused of infanticide to be innocent, on the grounds that she had not been examined before the expiration of a month after delivery. Dr. Montgomery attended a lady, the mother of five children, the youngest being five years old; her breasts were small, but neither flaccid nor pendulous; the nipples short, without the least shade of brown in the areolæ, which only exhibited the delicate rose colour so often observed in that part of the virgin breast; there were neither lines nor spots on any part of the abdomen, the os uteri was small and natural, the vagina contracted, and the fourchette perfectly entire. She had not carried her infant beyond the eighth month. I have repeatedly observed this fact in married women who were mothers, and it proves the great difficulty of answering the question, is there any certain indication of a former delivery? The signs of delivery are most evident at the full period of pregnancy, but none of them can be relied on separately, they must be considered collectively. There are also certain physical signs, such as a perfect hymen, or cohesion of the external genitals, which prove that delivery at the full period of pregnancy has not taken place. It is also a fact, that a woman may be delivered while in a state of insensibility, when intoxicated or narcotised, so that the infant may perish from want of necessary attention, and without any moral delinquency on the part of the parent. Women may abort on evacuating the bowels or bladder, or on account of numerous other causes, moral and physical, or which cannot be avoided.

When abortion causes the death of the woman, and a person is accused of having induced it by medicine or other means, it is necessary to examine the uterus, ovaries, vagina, and external genitals. If we find these organs in their usual state when unimpregnated, it is positive proof against the existence of pregnancy. If, however, the uterus is enlarged, and corresponds to the supposed period of pregnancy, we should carefully examine its contents, and unless we detect an ovum or the tissues that compose it, we are bound to decide in the negative. The uterus may be enlarged by moles, or hydatids, or other morbid growths, and if these have been lately expelled, we cannot discriminate between the state of that part of the uterus to which they were attached and that presented when an ovum has been separated. We must therefore look beyond the uterus for proofs of conception, and these are afforded by the ovaries or the gerims. It has long been supposed that corporalutea or yellow spots, marked with cicatrices in the ovaries, correspond to the number of conceptions or to the number of children a woman has borne; but recent researches have shown this to be very doubtful. The existence, however, of a real corpus luteum, is positive proof that conception has occurred. As this is a most important point, on which great light has

* Cyclopædia of Practical Medicine.
† Op. Cit.

been thrown by Dr. Montgomery, I shall quote his conclusions. He has perhaps investigated this subject more minutely than any modern physiologist, and his investigations were made on a vast number of women and brute animals.

He commences by denying that any yellow spot found in the ovaries is a real corpus luteum. This is also the opinion of Meckel. He then describes the characters of the corpus luteum, and premises that on examining the ovaries of a woman who has lately conceived, the one which supplied the germ differs from the other: it is larger, more vascular, feels fuller and softer to the touch, and presents a protuberance, of a deep or dull yellow colour, seen through a slightly reddish medium, and on some part of its covering is a distinct rent, imperfectly united, or a cicatrix. These appearances are very strongly marked in the inferior animals—in cows, sheep, sows, &c.: in the last named animal the ovaries after conception appear like bunches of round berries, from the prominence of the corpora lutea.

"Having satisfied ourselves," says Dr. Montgomery, "of the presence of the external characters, we proceed to examine the internal structure; in order to do which, we should make a section of the ovary into two longitudinal sections, by which we expose the corpus luteum, presenting the following characteristic appearances. In *form* and *size* it is almost an oval, with its longer axis varying from four to five-eighths of an inch, and the shorter from three to four-eighths; its thickness is generally less than its breadth. (Haller, Roederor). Its *texture* is obviously and strikingly glandular, resembling a section of the human kidney (De Graff), or, as some one has said, it is like a miniature of the particular sections of the brain, called by anatomists *centrum ovale*. William Hunter describes it as 'tender and friable like glandular flesh.'* *It is very vascular*, small vessels being very frequently visible without any preparation; but if fine-coloured injections have been previously thrown into one of the branches of the spermatic arteries going to the ovary, the vessels of the corpus luteum will be filled with the colouring matter, and are to be seen very distinctly running from its circumference towards its centre. *Its colour* is, as its name implies, a dull yellow, very similar to that of the buffy coat of the blood; exhibiting generally, recently exposed, a slightly reddish tinge, *exflavo rubens*. (Haller). Its centure exhibits either a cavity or a radiated white cicatrix, according to the period at which the examination is made; if within the first three or four months after conception, we shall frequently find the cavity existing, and of such a size as to be capable of containing a grain of wheat;* this cavity is surrounded by a strong white cyst, and as gestation proceeds, opposite of this cyst approximate, and at length close together, by which the cavity is completely obliterated, and in its place there remains a white cicatrix, whose form is best expressed by calling it radiated. Of this latter appearance it ought to be observed here, that it is visible as long as any distinct trace of the corpus luteum remains, and forms an essential character, distinguishing this body from every other that might be confounded with it. After the period of gestation has been completed, or the contents of the uterus prematurely expelled, so that gestation ceases, the corpus luteum soon begins to exhibit a very decided alteration in all its characters, until at length it is no longer to be found in the ovary. The exact period of its total disappearance we are unable to state; but we have found it distinctly visible so late as at the end of five months after delivery, at the full time, but not beyond this period; and the corpus luteum of a preceding conception is never to be found along with that of a more recent, when gestation has arrived at its full term; but in cases of miscarriage, repeated at short intervals, it may. At the time of delivery the corpus luteum is neither so large nor so vascular as at the earlier periods of pregnancy, except the woman should happen at the time of her death to be labouring under inflammation of the uterine system, in which case the corpus luteum partakes of the turgescence of the other parts, and, very remarkably, of their increased vacularity."—*Cyclopædia of Practical Medicine.*

We are further informed that, in the ovary of a woman who died two days after delivery, the white central cicatrix

* Anatomy of the Gravid Uterus.

* "Cavea dimidiam lineam lata, non profunda."—*Haller.*

was very distinct, and the protuberance formed by the corpus luteum remained. In a woman who died five weeks after delivery, the corpus luteum is diminished to half its original dimensions, is closer in texture, its colour is indistinct in some points, and paler, but the cicatrix is resident: its vascularity was diminished, and a fine injection did not pass into it. The external prominence remained visible, and though the woman had borne six children, there was only one cicatrix in each ovary. This description is of the ovaries, which are in Dr. Montgomery's museum. In another specimen, taken from a woman who died in the twelfth week after delivery, the external prominence was greatly diminished; the corpus luteum had lost much of its colour, and on being immersed in spirits became of a light grey shade; its texture was more condensed, and resembled the surface of a cut apple; it was diminished about one third in width, and the cicatrix was observable. The specimen was taken from a young woman, who died five months after her first delivery. In this example the ovary retained very little of its increased size or altered form; the prominence was easily recognizable, but the external cicatrix was perfectly obvious. On dividing the corpus luteum, the peculiar colour was lost, except in one spot, where it was as large as a mustard seed, in which the central radiated cicatrix was still visible; the yellow colour entirely disappeared when immersed in pure spirit diluted with water, which does not happen when the part during gestation, or after delivery, is placed in the same fluid. Thus the presence of a corpus luteum is positive proof of a conception, but not that a woman has borne a full grown infant, as various causes may produce abortion. But the converse will not hold good. "We believe," says Dr. Montgomery, "no one ever found a fœtus in utero without a corpus luteum in the ovary, and that the truth of Haller's corollary remains undisputed, 'nullus unquam conceptus est absque corpore luteo.'"* This able author refutes Sir E. Home's statement that the corpus luteum at delivery is not recognizable, but there is another in the opposite ovary; if the second corpus luteum which is denied to exist, belongs to the ovum not completely formed, how does it happen that we always find on the surface of the former one a cicatrix, through which the impregnated ovum has escaped? This cicatrix is never found on the ovaries of virgin-animals. Moreover, in women who have borne several children, it rarely happens that more than one or two cicatrices are detected. Dr. Montgomery concludes by observing, that after repeated observations and dissections of a great number of women and a much larger number of brute animals, he never saw a true corpus luteum, except in females after conception; and his firm conviction is, that such a corpus luteum was never found in a virgin animal. He then goes on to disprove the existence of corpora lutea in unimpregnated animals, in my opinion, has completely succeeded; and he then cites De Group, Haller, Malpighi, Meckel, Bostock, Blumenbach, Haighton, Cruickshanks, Denman, Cline, Charles M. Clarke, Astley Cooper, and Abernethy, in support of his conclusion. He finally sums up in the following words:—"Now we have seen several of these virgin corpora lutea, as they are unhappily called, and have preserved several specimens of them; and, according to our experience, they differ from those of impregnation in all the following particulars:—1, there is no prominence or enlargement of the ovary over them; 2, the external cicatrix is wanting; 3, there are often several of them in both ovaries, especially in patients who have died of tubercular diseases; 4, they are not vascular, and cannot be injected; 5, their texture is sometimes so infirm, that they seem to consist merely of the remains of a coagulum, and others appear fibro-cellular, resembling the internal structure of the ovary; but in no instance did we ever see them presenting the soft, rich, and regularly glandular appearance which Hunter meant to express, when he described them as "tender and pliable, like glandular flesh;† 6, they have neither the central cavity, nor the radiated cicatrix which results from its enclosure."‡

The value of the preceding instructive remarks will be obvious on perusing the following medico-legal trials:—

A few years ago, four medical stu-

* Opera Minora. Vol. ii.

† Description of the Gravid utorus.

‡ See Cyclopædia of Practical Medicine already quoted.

dents were tried at Edinburgh, for exhuming the body of a lady at Glasgow. The corpse was so disfigured that it could not be identified; a corpus luteum was found in one of the ovaries, which proved that the body was not that of the lady in question, who was a virgin advanced in life. The accused were acquitted, and a dentist identified the body, by producing a cast he had taken from the gums.

The second trial was still more interesting. A Mr. Angus was tried in Lancashire, in 1808, for the murder of a Miss Burns, with whom it was alleged he had cohabited. A bottle labelled "Savine oil" was found in his bedchamber, and according to a witness who sold it to the prisoner, it contained four drachms. Many of the symptoms confirmed the opinion that the deceased had taken it. One servant swore that she complained of pain in the bowels, great thirst followed by vomiting of a black and green matter. It was evident that deceased took some medicine, for, during her sufferings, she exclaimed, "Oh Betty, what bile comes off my stomach! I wish I had taken an emetic long since." Her thirst now increased, and she had difficulty in evacuating the bladder. The vomiting continued all day until evening, when it ceased, and was succeeded by purging, which remained urgent during the night, and until her death, which took place next morning. The position of the body was remarkable. It was found, to use the words of the housemaid, "covered of a lump," the elbows resting on the knees, and one foot *craddled* under her, so that it might be fairly inferred from this position, that the deceased had suffered much pain. On examining the body the stomach was found highly inflated and perforated; it was evident that a fœtus had been recently expelled from the uterus. The examination was conducted so slovenly, that the ovaries were not examined until after the acquittal of the prisoner, and then a corpus luteum was discovered. Mr. Hay took the uterus and its appendages to London, and shewed them to the most eminent practitioners there. He received certificates from Drs. Denman, Haighton, Sir C. M. Clarke, Mr. Cline, Sir Astley Cooper, and Mr. Abernethy, all stating that the uterus and its appendages exhibited appearances that could alone be explained on the idea of an advanced state of pregnancy. "And it appears to have been universally allowed that the discovery of the corpus luteum proved the fact beyond a doubt;" and, in addition to these authorities, I must add that of Dr. Montgomery, who has examined the bodies of women of all ages, and under all the varying circumstances of virginity, also after intercourse, during gestation, and subsequent to delivery, at different periods from conception, and dissected hundreds of inferior criminals; and his firm conviction is that of Haller, "*conception never happens without the production of a corpus luteum,*" and that "*the corpus luteum is never found in virgin animals, but is the effect of impregnation.*" He also agrees with Meckel, that "every yellow substance in the ovary is not a corpus luteum."

In fine, concealment of pregnancy ought not to be considered a proof of the guilt of the woman. Every one knows that if the pregnancy is the result of illicit commerce, it is natural to suppose that the woman would wish to conceal her disgrace as long as possible. This was the opinion of Dr. William Hunter. But when it is proved that the woman had applied to different medical practitioners to be bled in the foot, or to procure abortives, and if she had employed these or other means, we have the strongest circumstantial evidence that her *intention* was criminal. These, however, are matters of fact which require to be considered by the legal, and not by the medical profession.

But we should always recollect the numerous causes of involuntary abortion, before giving a decisive opinion in any case; and in all doubtful instances we should lean to the side of mercy.

MISCELLANEOUS

MEDICAL BOTANY.

COMMUNICATED WITH THE VIEW OF CALLING THE ATTENTION OF NATURALISTS TO THE MEDICINAL PROPERTIES OF PLANTS.

By Dr. Castle.

VII.

AMERICAN SANICLE.

The root of this plant, commonly called *alum-root,* is admitted into the pharmacopœia of the United States of America, as a valuable astringent. The plant itself is the *Heuchera Americana* of Lin-

næus,* belonging to *Pentandria Digynia* of the same author, and to De Candolle's natural order *Saxifragaceæ*. It is a small perennial plant, about a foot and a half high, and clothed with clammy pubescence. It is found wild in various shady places, from New England to Carolina, in the Illinois region, in New Spain, and Peru. The stem is usually leafless; the leaves springing from the root are on long foot-stalks, somewhat five or seven-lobed, toothed; the flowers are disposed into a panicled, elongated thyrse; the calyx permanent, five-cleft, petals reddish, lance-shaped, equal in length to the calyx; stamens five, projecting much from the flower; styles two, of the length of the stamens; the seed-vessel, a one-celled, many-seeded capsule, crowned by the dry calyx; and the seeds rough. The root, as before observed, and as its popular name would imply, is intensely astringent, with which view it is used as a styptic in internal hæmorrhages and to cancerous sores. In moderate doses, either alone or united with aromatics, it might, I have no doubt, be beneficially given in internal hæmorrhages, and most cases in which astringents are admissible.

The plant was introduced into this country as far back as 1656; it succeeds very well in any light garden soil, and may be readily propagated by dividing the roots. It commonly flowers from May to July. Bib. ref.—*Lin. spec.* 328. *Schkuhr, handb. t.* 58. *Herm. Parad. t.* 131.

VIII.

ARBORESCENT BLADDER-SENNA.

This species of bladder-senna enters the pharmacopœias of Paris and Geneva. It is the *Colutea arborescens* of Linnæus,† belonging to his *Diadelphia, Decandria,* and to the natural order *Leguminosæ* of De Candolle. It is a hardy shrub, varying from six to ten feet in height, native of the middle and southern parts of Europe. On Mount Vesuvius it is found even in the ascent of the crater, where scarcely any other plant can exist. The leaves are unequally-pinnate, composed of from nine to eleven elliptic leaflets, rather obliquely cut at the apex, glabrous and green above, and of a glaucous green beneath. Stipulas small. Peduncles axillary, usually bearing about six yellow flowers. Calyx five-toothed, Corolla papilionaceous, with a flat, bicallous vexillum larger than the obtuse keel. Stamens ten, united into two bodies. Stigma lateral, hooked under the top of the style. Seed-vessel, a closed legume, stalked, ovate, boat-shaped, inflated, and scarious. The leaves possess purgative properties, similar to the true senna, but in an inferior degree. They are sometimes used for the same purposes, but more frequently, on account of their cheapness, they are mixed with the true article by way of adulteration. That they may, however, be substituted for genuine senna, in some ordinary cases Allioni has fully proved, but as they are less active, a larger quantity must be used to obtain the same effect.

The bladder-senna shrub was introduced into this country as early as 1568; it grows well in shrubberies, and from the profusion and long continuance of the blossoms, it is very ornamental. Bib. ref.—*Lin. spec.* 1045. *Fl. medic.* 1 *t.* 51. *Bot. Mag. t.* 81.

IX.

SPANISH-AMERICAN IPECACUANHA.

This shrub, the *Psychotria emetica* of Mutis,* belongs to *Pentandria, Monogynia* of Linnæus, and to *Rubiaceæ* of De Candolle. It is a native of New Granada, near Nares on the banks of the Magdalena, and in the province of Girone. In stature it varies from twelve to eighteen inches; stem erect, simple, and pilosely tomentose; leaves opposite, stalked, oblong, acuminated, narrowed at the base, membranous, ciliated, and rather pilose beneath; stipulas egg-shaped, very short; flowers white, on axillary, few-flowered stalks; calyx, with an ovate tube and a short limb; corolla short, funnel-shaped, five-cleft, regular, the throat closed by villi; stamens five; stigma bifid; and the berries bluish, ovate-globose, smooth, crowned by the limb of the calyx. The root, (known in the shops as *Spanish-American, Black,* or *Liquorice Ipecacuanha),* is perpendicular, knotted, and branched, is destitute of irregular rings or with but few, but is marked with longitudinal striæ; the axis is slender, and the bark thick and friable. Its fracture is resinous, of a decided black-grey colour, which becomes still stronger

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* H. cortusa *Michaux.* H. viscida, *Pursh.*
† C. hirsuta, *Roth.*

* Ipecacuanha noir *Rich.* Cephælis emetica *Pers.*

when moistened. It possesses emetic properties and is without taste, but it does not appear to be in much esteem, therefore, it is scarcely in request as an article of commerce. I have not been able to ascertain whether it has been attempted to cultivate the plant in this country; like several other species of the same family, I should suppose it would equally thrive with them. Those which have been introduced are of the most easy culture and propagation. BIB. REF.—*Mutis, in Lin. fil. suppl. p.* 144. *Humb. Bonpl. and Kunth. nov. gen. amer.* 3. *p.* 355.

SOME REMARKS ON THE NATURE OF

THE GANGLIA.

The nature of the ganglia, interspersed so numerously throughout the body, may be that of diminutive centres of sensation, and in some degree of motion, exclusive or independent of the great seat of sensation, *the brain*.—For instance, in persons asleep, we perceive that, when tickled or tormented, they involuntarily, that is, without the intervention or action of *the mind*, withdraw the affected part from the annoyance. This action takes place through the medium of the *ganglia*, which perform the part of so many obstacles to the passage of the external impressions towards *the brain;* this is the case until these impressions are increased to such a degree, that the intervening *ganglia*, are of no longer any avail in opposing or staying their progress on towards the great seat of sensation, where *perception* now takes place, and the functions of the *ganglia* cease. However, the external impressions may not only be increased to such a degree as to overpower the intervening *ganglia*, but even to overpower *the brain* itself, where, of course, death, or at least insensibility, ensues. Winslow, Willis, and Viusines, assert that the *ganglia*, are small brains. However, they have not spoken concerning their physiology; and also an objection against their theory is, that the combination of nervous influence which, they assert, occurs, might be as well accomplished by the mere union of the nervous filaments. Now this objection could not be used against the above-mentioned theory, for with equal correctness might we assert the same concerning *the brain*. Cuvier, (Lec. d'Auat. Comp. Lutr. p. 26,) remarks, "that the *ganglia* are larger, and more numerous, when the *brain* is deficient in size." This exactly bears out the foregoing hypothesis, which is intended to prove that the *ganglia*, more or less, supply the place of *the brain*. May we not draw a parallel between the above-mentioned action and other minor functions, which are also independent of the great *viscera*, to whose class they belong? for instance, the action consequent on slight local inflammation is carried on by the contractility of the blood-vessels, without any accompanying action of *the heart;* and if we go a step further, may we not perceive stronger marks of connexion between these two systems, in the nature of cause and effect?

We also find that the nerves of the *animal* function run to the brain or spinal marrow, while those of *organic* chiefly to *ganglia*, evidently on the same principle, for the functions or motions of the parts, which the former supply, are under the control of the will, while those of the latter are entirely independent of that power. This shows that the *ganglia* are, in effect, the representatives of the brain, as far as regards one of its functions, namely, the power of causing and regulating *motion*, in tissues, whether muscular or vascular. However, these nervous circulations, as they may be called, have communications, as the sensation of pain or uneasiness, (no matter how diminutive) in any of the viscera of *organic* life, plainly testifies. We see certain specific actions take place in the system, such as that of *circumscribed inflammation*, for instance, in which, with all the characteristic marks of that affection, we particularly notice increased vascularity in the part, which is not, as nominally would be the case, a consequence of the action of its derivative organ, as is evident from the observation of both parts, but resulting principally, indeed almost solely, from immediate nervous influence, or in other words, from the action of the *ganglia*, consequent on ultimate nervous irritation; this action between the *ganglia*, and the parts as vessels they are connected with, proceeds onwards, unless means are taken to put a stop to its extension, until the entire nervous system is engaged. Other actions can be easily specified by those who wish to proceed further into this interesting branch of physiology.

R. E. L.

Dublin,
February, 1836.

ANIMAL MAGNETISM.

Lecture delivered in Edinburgh, on 30th January.

(Continued from p. 903.)

About the middle of the seventeenth century, there appeared in England several individuals, who cured, or, to use the language of the sceptic, who *pretended* to cure, various diseases, by touching, rubbing, or stroking with the hand. Of these individuals, I shall only direct your attention particularly to one, with whose name many of you may be familiar—an Irish gentleman, Mr. Valentine Greatrakes. This genetleman is said to have, at first, conceived the idea that nature had endowed him with the faculty of curing scrofulous complaints by the touch of his hand; but although his efforts were directed, for some time, solely to the cure of complaints of this kind, he subsequently extended his practice to different other morbid affections. The method employed by Greatrakes was almost exactly similar to the most simple processes adopted by the present magnetisers, and even the effects he produced, so far as we have been made aware of them, appear to have been, in many respects, nearly the same. In the accounts transmitted to us of the cures performed by Greatrakes, however, no mention is made of the occurrence of sleep or somnambulism in his patients; whether it be that he did not produce these phenomena, or that he did not particularly observe them. Several of the systematic writers upon Animal Magnetism, indeed, have remarked that the curious phenomenon of somnambulism rarely appears in the magnetic practice, unless when it is intentionally sought to be produced—a circumstance which goes far towards establishing the influence of volition in determining the efficacy of the processes; nay more, it is alleged that somnambulism may take place in the patient without being observed by the operator, as it is said to have actually occurred to some of the early disciples of Mesmer. It was not until after the retirement of Mesmer, as will be seen in the sequel, that this singular affection, as an occasional consequence of the magnetic treatment, was fully discovered, and its most interesting phenomena were attentively examined, and their reality completely ascertained by numerous and decisive experiments.

The evidence in favour of the reality of the cures performed by Greatrakes, is as strong as can well be imagined. Joseph Glanville, an eminent writer of that age, has preserved some extracts of letters addressed to him, upon this subject, by the then Lord Bishop of Derry, in Ireland. From these it appears that the bishop, himself an eye-witness, was perfectly satisfied of the reality of these cures, and of the absence of all imposture; but he had many reasons to persuade him that there was nothing miraculous in the procedure; and he explained the whole matter upon physical principles. Dr. Henry Stubbe, physician at Stratford-upon-Avon, published a pamphlet upon Greatrakes, relating some of his own observations upon the cases he had himself witnessed, and declaring his conviction that, in his opinion, "there was no manner of fraud in the performances." From the letters of Flamsteed, recently published, it appears that that celebrated astronomer had himself been a patient of Greatrakes, and although he does not seem to have derived much benefit from the treatment, yet he bears ample testimony to the reality of the cures performed upon others, and to the general efficacy of the processes. The Honourable Mr. Boyle, Cudworth, and many other learned and eminent men, testify to the same effect. In short, the evidence in support of the processes and cures of Greatrakes appears to be as satisfactory and unobjectionable as is possible in the circumstances of the case. A mere denial, at this time of day, cannot invalidate the facts so strongly attested, and the evidence is far beyond the reach of sophistry. Divines, physicians, and philosophers, and these contemporaries and eye-witnesses, all unite in giving the most unequivocal testimony in favour of Greatrakes; and any mystery that may have enveloped his proceedings may now be rationally explained by the subsequent discoveries of Animal Magnetism.

A great many years after Greatrakes, there appeared in Germany a still more extraordinary character in the person of John Joseph Gassner, a Roman Catholic clergyman, born at Bratz, in Suabia. Gassner had himself been cured by exorcism—unquestionably a species of Animal Magnetism—of a tedious complaint, which had previously resisted all the ordinary means of the medical art; and from that period he took up a notion that the greater part of diseases ori-

ginated from demoniacal possession, and could only be effectually cured by exorcism. Accordingly he commenced curing the sick among his parishioners in this way; and the fame of his success soon brought a number of other patients to him from different and distant quarters. He is said to have cured four or five hundred persons in a year. After a time, he went to reside with the Prince Archbishop of Ratisbon, at Elwangen, where he performed a vast number of astonishing cures, especially upon patients affected with epileptic and other spasmodic complaints. So great was the number of persons who resorted to him for assistance, that there are said to have frequently been ten thousand patients and their friends encamped in tents in the vicinity of Ratisbon. His proceedings were carried on in public, in the presence of a multitude of spectators—an official person took regular and copious minutes of his procedure, which were attested by many individuals of the first rank and the highest respectability.

Gassner appears to have possessed and exercised the most astonishing power over the organism of his patients—a power which would be absolutely incredbile, were it not vouched by the most ample and the most respectable evidence. He could vary the pulses of his patients at will—make them strong or weak, quick or slow, irregular or intermittent, at the suggestion of the physicians who attended. He could paralyze their limbs at pleasure—make them weep or laugh, tranquillize or agitate them—by a single command expressed in Latin, or even conceived mentally. In short, the phenomena he produced were of the most extraordinary character. The reality of the facts, however, was not denied except by a small number of sceptics; and even the celebrated De Haen, one of the most eminent physicians of his age, conceiving it impossible to account for these cures in a natural way, was compelled to ascribe them to the devil.

Besides Greatrakes and Gassner, I might adduce several other well-authenticated instances of individuals who, at various times, have exercised similar powers, and of whom we have credible accounts; and I have no doubt that there may have been many others whose proceedings have not attracted public attention, and of which, consequently, history has transmitted no regular record. But I must now hasten to introduce to your notice the man who, at length, completely demonstrated the existence of the much-disputed power, and, in a great measure, dispelled the mystery which had so long hung over its exercise.

The lecturer then proceeded to give an account of Mesmer, the modern discoverer of Animal Magnetism, and to describe the steps by which he was gradually led on to his curious discovery, in pretty nearly the same terms as in *Isis Revelata*.

With regard to Mesmer's speculations on the subject of an universal fluid, Mr. COLQUHOUN observed that it is perhaps to be regretted that Mesmer should have thought it necessary, at this early period, to mix up the few simple facts which his discovery had developed, with a theory which, so far from elucidating, rather tended to involve them in obscurity, in doubt, and in mystery, and thus to give an additional handle to scepticism. His practice itself, attended, as it was, with a great deal of whimsical, superfluous, and mystical ostentation and mummery, had precisely the same tendency.

Mesmer, indeed, was constitutionally disposed to mysticism, and it would appear that for a considerable time, at least, he either did not himself entirely comprehend the nature of the discovery he had made in its naked simplicity, or that he was anxious to conceal it from others. It is scarcely surprising, therefore, that he should have been almost entirely deprived of the countenance of his brethren of the medical profession, or that learned men should have subsequently attempted to account for the facts by a theory which seems to have been founded, in a great measure, upon the unessential accessories of his treatment, and which, although long deemed satisfactory by the ignorant, was subsequently found to be utterly inadequate, and has now been completely exploded, in consequence of a clearer experimental knowledge of the agency in operation, and of the phenomena produced. Animal Magnetism, accordingly, was for a long time viewed as a medical and philosophical heresy; those professional gentlemen who became convinced of the efficacy of the treatment, and ventured to patronize the practice, were persecuted by the faculty, and deprived of their privileges; and Mesmer himself was most unmercifully ridiculed by the wits of Paris, and treated as a

mere empiric and impostor. Nevertheless, in spite of this powerful, this overwhelming opposition, Animal Magnetism daily made considerable progress among the public; indeed, it is rather remarkable—such is the buoyant nature of this discovery—that the belief in its reality has always been found to flourish in a direct *ratio* with the scepticism and ridicule with which it has been attempted to overpower it. It is no less remarkable, too, that this progress was most conspicuous, not among the ignorant and illiterate, but among the learned and intelligent; among men of education and philosophical habits, who were most capable of investigating the subject and of appreciating its merits. This could only have happened in consequence of the ascertained efficacy of the treatment, and the demonstrated reality of the phenomena.

After having had some ineffectual communications with the French government of that day, Mesmer, at length, resolved to disclose the secret of his method to such individuals as were willing to pay him a certain stipulated sum for their instruction; and, for this purpose, he established a private society, under the designation of *L'Harmonie*, where he initiated a number of persons into his mystery, under a sacred promise of secrecy. But the secret, it would appear, was not kept; the practice became diffused, and harmonic societies were instituted in several of the provincial towns of France, which published detailed accounts of their proceedings, and of the cures performed by means of the new processes. The extent, indeed, to which the practice of Animal Magnetism prevailed, at that time, in France, the growing confidence of the public in its efficacy, and, I may add, the abuses with which it is said to have been occasionally accompanied, in the hands of the ignorant and the unskilful, at length attracted the serious attention of the medical faculty, at whose instigation the government was induced to issue a royal mandate, in the year 1784, requiring them to appoint commissioners to investigate the matter. Two commissions were, in consequence, appointed—the one consisting of members of the Academy of Sciences, and of the Medical Faculty; the other composed of members of the Society of Physicians. These commissioners, as is well known, published reports which were considered altogether unfavourable to the pretensions of Animal Magnetism. They did not, indeed, entirely deny the facts; but they attempted to invalidate and get rid of them by ascribing them to causes different from those assumed by the magnetisors, *viz.* to imagination, imitation, and *attouchement*. In short, Animal Magnetism was supposed to be refuted and disgraced, by displacing one theory, and substituting another in its stead. It is somewhat remarkable, however, that one of the ablest and most learned of these commissioners, the celebrated physician and botanist, M. de Jussieu, not only refused to concur in the report drawn up by his associates, although earnestly urged to do so, even by the government; but that he actually published a separate report of his own, of a totally different character and complexion, in which, so far from countenancing the theory of imagination, imitation, and *attouchement*, he unequivocally admitted the action of the magnetic fluid, or of some fluid or other, upon the human body, which was pointedly denied by the other commissioners, for this singular reason—that they could not see it—even with their spectacles, I presume. As some of the opponents of Animal Magnetism, even at the present day, and with the document itself at hand, seem disposed to dispute the favourable character of Jussieu's report, I shall take the liberty of quoting from it the following short but significant passage. Referring to his own experiments, which appear to have been made with great care and with great attention to the phenomena, he says: "These facts are neither very numerous nor very varied, because I could only adduce those which were sufficiently verified, and with respect to which I could have no doubt. *They are sufficient to justify us in admitting the possibility or the actual existence of a fluid, or agent, which is transmitted from one man to another, and which sometimes exerts a sensible action on the latter.*" Now, is not this the very principle for which the Animal Magnetists contend, and which, they allege, has now been demonstrated to a certainty by numerous and decisive experiments since the period of Jussieu's Report?

Meanwhile, Mesmer withdrew from Paris, and retired to Switzerland, where he died, on the 5th of March, 1815. He is said to have continued the practice of the magnetic treatment privately, for the benefit of the poor in his neigh-

bourhood, until the period of his death. His character, as might naturally be expected, has been very differently appreciated by his friends and his enemies. It has been an usual practice among the opponents of Animal Magnetism, to endeavour, as much as possible, to blacken the reputation, and to depreciate the merit, of its modern discoverer. This I cannot consider as a very liberal or a very laudable task; nor am I able to perceive how the character of the individual, good or bad, can affect the reality or the importance of his discovery. Mesmer was a man, and, like other men, he had his weaknesses and failings. As I have already observed, he appears to have been constitutionally disposed to mysticism; he was, perhaps, vain and ostentatious; he paraded his discovery in all the useless trappings of quackery. But he was unquestionably sincere in the doctrines he professed; and the general recognition, upon the Continent, of the reality and importance of the facts he developed by his practice, proves that he was no empirical impostor. Throughout the whole of his proceedings, I have seen nothing to warrant the slightest imputation upon his moral character.

Another method has been adopted, with a view to depreciate the merit of Mesmer, which is as paltry as it is futile. This consists in denying him the credit of the original discovery of the magnetic action. Now, it is admitted that the magnetic action had been observed from the most remote times; but the principles which regulate its operation were little understood, and it had not been systematically applied to any practical and beneficial purpose, until Mesmer, by his researches, at length gave it life and efficacy, and enlisted it permanently into the service of suffering humanity.

After the retirement of Mesmer, three schools of Animal Magnetism were formed in France. The principal one, which adhered to the constitution of its founder, had its chief seat at Paris. Another was established at Lyons and Ostend, under the direction of Chevalier Barbarin. This school operated in a purely psychicial manner, admitting no other agents in the magnetic process than *faith* and *volition*. Their motto was, *Veuillez le bien—allez et guerissez!* The third school was established by the Marquis de Puysegur, at Strasburg, under the name of the *Society Harmonique des Amis Reunis*. It combined the physical and pyschical modes of treatment; abolished the *crises* or convulsions, which were generally sought to be excited by Mesmer and his disciples, along with the *chambers de crise;* and the whole magnetic treatment was conducted in a manner the best calculated to ensure the repose and comfort of the patients. It is to the Marquis de Puysegur, too, that we are principally indebted for the discovery of the Magnetic Somnambulism, and of its singular phenomena.

There have been various opinions, however, with regard to the merit or demerit of Mesmer's practice; and it has been ably and reasonably defended, not only upon the ground of its success, but upon an attentive consideration of the analogies of nature. Nature, it has been said, cures many diseases only by means of crises, or violent efforts; and "in medicine it is generally considered far better and more advantageous, that a dangerous disease should be got rid of in a decisive, but happily terminated, struggle for life or death, than that, by any sudden check given to the crisis, the disorder should fall on any internal part, and thus attack and corrode the vital powers." In confirmation of this principle, I may refer to our celebrated townsman, Dr. Abercrombie's excellent work on the brain, in which that very eminent physician has adduced several instances in which paralysis was effectually cured by a smart fit of convulsions, or by some other violent effort of nature. It is the experienced physician only, however, who is capable of distinguishing this crisis from the disease itself. It is his business to manage, to moderate, to increase, to control it, according to the nature and necessity of the particular case; and, when thus skilfully regulated, it may prove highly salutary. This seems to have been the principle upon which Mesmer proceeded; and it will be remembered, that many of the cases, in which his assistance was called in, were such as had previously baffled all the ordinary medical skill. But many of his successors in the magnetic art, however enlightened in other respects, were not practical physicians, and, therefore, they probably acted prudently in not attempting to excite an organic tumult, which they were incapable of directing to any beneficial end. This, however, is strictly a medical question, and had better be left to the determination of professional men.

Mr. C. then alluded to the recent re-

port on Animal Magnetism by a committee of the French Royal Academy of Medicine, and quoted some of its most interesting conclusions. In reference to this report, he stated, on the authority of M. Foissac, that there were between one and two hundred individuals present during the experiments made by the committee, among whom were seventy-six of the principal physicians of Paris.

In concluding, Mr. C. announced, that in his next lecture, he should proceed to give a description of the various magnetic processes, and of the ordinary and extraordinary effects produced.

Lecture delivered at Edinburgh on the 6th of February, 1837.

Mr. Colquhoun stated that he had now concluded his outline of the history of Animal Magnetism, and should proceed to submit some observations upon the magnetic power and susceptibility, the processes employed in the treatment, and the effects produced upon the organism of the individual who is subjected to the influence of these processes.

It has been alleged by some writers on the subject, that every person is not endowed with the capability of operating magnetically upon others; and that even he who does possess this power, in a certain degree, will not always exercise it with salutary effect. Certain constitutional properties, partly physical, and partly psychical, or moral, are said to be requisite to the success of the practical magnetiser; and the fortunate combination of these requisites may, in most cases, be considered as a gift of nature. *Greatrakes, Gassner, Mesmer, Puysegur, Deleuze,* and others, appear to have been endowed with the magnetic faculty in a very superior degree, and hence the apparent facility with which they produced the most remarkable phenomena. It is certain, however, that this magnetic power may be, if not created, at least greatly strengthened by exercise.

A similar inequality has been observed in the susceptibility of patients; some being not at all, others very slightly, and others, again, very easily and very powerfully affected by the magnetic treatment. In general, strong and healty persons exhibit little or no susceptibility, while individuals who are weak or diseased, are almost always affected by the processes, when judiciously administered, in various ways, and in different degrees.

With regard to physical constitution, experience seems to have demonstrated what might otherwise have been anticipated, as most agreeable to analogy, that the magnetiser ought to possess a preponderance of energy over his patient; although a few rare instances have been observed in which weak persons have magnetised with effect. A sound state of bodily health, as well as a good natural constitution, are essential to the magnetiser. If a sick person attempts to magnetise, he will probably increase, instead of alleviating the sufferings of his patient. Neither very young nor old persons can magnetise with proper effect, probably because they are deficient in nervous energy. To these physical qualifications must be added the psychical or moral, consisting of a sound and energetic mind, benevolent feelings, a lively faith, and a determined despotic volition.

After describing the magnetic processes, as in *Isis Revelata,* Mr. C. proceeded to direct the attention of his audience to the effects produced upon the organism of the patient by the operations described. These effects are very various —some of them not very remarkable, but others truly wonderful; insomuch, indeed, that, considering the apparent inadequacy of the means employed, they can scarcely be expected to obtain belief, excepting from those who have actually experienced or witnessed them. In fact, scepticism is here perfectly natural and justifiable on the part of those who have had no opportunity of seeing and examining the phenomena, or who are yet ignorant of the ample and incontrovertible evidence which may now be adduced in favour of their reality. All the great practical magnetisers, as well as all the most eminent writers on the subject— Weinholt, Sprengel, Hufeland, Deleuze, Bertrand, Georget, Rostan, Foissac, Filassier, &c., were, at one time, as determined sceptics as any of the individuals whom I have now the honour of addressing—they laughed at Magnetism, and ridiculed the magnetisers. And how were these eminent men, at length, converted from obstinate scepticism to firm belief? Why, in the simplest but most effectual manner imaginable, *viz.* by experiment and observation; by following the advice of the magnetisers: "Do as we do, and you will be forced to believe as we do." All persons, it is true, may not be practical magnetisers, they may not have an opportunity of witnessing

the extraordinary phenomena of which I am about to speak; but all have at least, the means of examining the evidence, given upon the authority of their own experience, by learned, enlightened, competent, and credible men; and this evidence we dare not reject, without renouncing all faith in human testimony, and abandoning our minds to an obstinate, an universal, and a hopeless scepticism.

It sometimes happens that no perceptible effect is produced upon the patient during the magnetic treatment, of which the efficacy only becomes apparent in the gradual restoration to health. Several cases of this description are mentioned by Dr. Weinholt, Dr. Passavant, and other medical writers. In many instances, however, the magnetic patient manifests a variety of symptoms of a nature more or less remarkable. These I shall distinguish into the medical or therapeutic, and the physiological effects—the latter including those organic changes which appear to have no immediate reference to the sanative process.

Mr. C. then gave a description of these various effects of the magnetic treatment, which will be found in *Isis Revelata*, Vol. I. p. 277, and 280, &c.

The most extraordinary effect produced upon the patient by the magnetic treatment is the state of *Somnambulism*, with all its very singular phenomena—such as the insensibility of the corporeal organs, the occasional transference of the faculties to other than the usual and appropriate parts of the nervous system, self-intuition, the development of the sanative instinct, *clairvoyance*, prevision, prophecy, &c. Now, I am aware that the reality of these phenomena has excited the highest degree of scepticism among philosophers in this country, and that some of our most eminent physiologists, who are ignorant of the character of that peculiar pathological state in which they originate, who have not had an opportunity of witnessing the facts, and who have not condescended to examine the evidence, have roundly declared them to be impossible. Nevertheless, I do not hesitate to affirm, with the utmost confidence, that the existence of these phenomena has been as incontrovertibly demonstrated as any facts in physical science; and that those who deny their reality in the face of the evidence, betray a wilful and unpardonable ignorance of physiological psychology—that is to say, of those interesting, and now well-established facts, which prove the intimate connection that subsists between the moral and physical nature of man—between mind and matter—and their reciprocal influence upon each other. I must regret, however, that the limits within which I am restricted in these lectures, render it impossible for me to lay the evidence of the reality of these phenomena so fully before you as I should otherwise have wished. But I shall endeavour, with as much brevity as is consistent with perspicuity, to explain to you the nature and the phenomena of this peculiar pathological affection, referring you for farther information and more complete evidence, to *Isis Revelata*, where the subject is fully considered, and amply illustrated by examples.

Somnambulism, or *Somno-vigil* (SLEEP-WAKING), as all who condescend to investigate the subject, must soon become aware, constitutes a very uncommon, and a very peculiar state of the human organism. It appears to have been in some measure known to the ancients, and it has been noticed, and partially described, by Hippocrates, Aristotle, and Galen. It is only in the works of modern authors, however, that we find minute and accurate descriptions of its singular and interesting phenomena; and as will be seen hereafter, the discoveries of Animal Magnetism have greatly increased our knowledge of the character of the affection.

The late learned and ingenious Dr. Bertrand of Paris, who published an elaborate and most philosophical treatise upon this subject, distinguishes four varieties of Somnambulism, in reference to the particular causes from which they are supposed to originate: 1. The *essential* or *idiopathic*, which occasionally occurs in some individuals without any discoverable cause, and is, therefore, thought to depend upon some constitutional idiosyncrasy; and this species is generally denominated the *natural* or *spontaneous* somnambulism, or *noctambulism*. 2. The *symptomatic*, which sometimes manifests itself in the course of certain other morbid affections. 3. The *artificial*, which is frequently produced by the magnetic treatment; and, 4, The *ecstatic*, which is occasionally generated by a high exaltation of the mind, and of which many remarkable instances have been witnessed in the *devotional ecstasis*. In all of these modifications of the affection in question, the phenomena manifested are of an entirely similar character; the pathological

states are believed to be the same in kind but may differ greatly in degree.

As the nature of this peculiar affection can be made most intelligible by examples, Mr. C. proceeded to adduce from *Isis Revelata* a few instances, first of the *natural*, and afterwards of the *magnetic* somnambulism—the former being quite as extraordinary, miraculous, and incredible, as the latter; a great analogy, if not a complete identity, existing between the phenomena of both.

Mr. C. then announced that, in his next and last lecture, he should consider the general conclusions that may be deduced from the facts which have been stated—give a concise exposition of the various theories which have been propounded with a view to account for the phenomena—and point out the importance of Animal Magnetism to Physiology and Psychology.

The London Medical
AND
Surgical Journal.
Saturday, March 18, 1837.

THE ADDRESS OF THE PRESIDENT OF *The British Medical Association.*

We have much pleasure in placing the following extract before our readers, and we cannot help observing, that this Journal was the first to denounce the inhumanity of the Poor Law Act, which is now universally detested.

It is, indeed, a most remarkable coincidence, that there is now a deputation from the profession in Ireland, in communication with the government, whose object is, to prevent the interference of the English Poor Law Commissioners with respect to the public charities of the Sister Kingdom, so far as the medical profession is concerned. This deputation has been warmly received by the government, and will, in all probability, obtain a bill for Ireland which will place the medical department of the public charities under a board of both civil and medical commissioners, and thus secure to the poor most efficient aid and medicines, as well as a fair remuneration for the profession. Should this equitable and truly charitable object be obtained for Ireland, there is some reason to expect, that the condition of the medical officers of our workhouses will be also modified and improved, for it cannot remain in its present degraded state. It is worthy of remark, that the origin of the British Medical Association was, in a great measure, owing to the Poor Law Act, and the threatened extension of this vile law to Ireland has, in like manner, been the cause of uniting the members of the profession in that section of the kingdom. The great body of medical practitioners in England and Ireland may be truly said now to be united in one common cause; and they cannot fail, by continued perseverance, and steady co-operation, in securing important benefits to the sick poor, protecting their own interests, and elevating the medical profession to that position it so justly merits in civilized society.

ORIGIN OF THE ASSOCIATION.

The British Medical Association owes its formation chiefly to the following circumstances. In the autumn of 1836, the Poor Law Amendment Act and the plans of the commissioners for affording medical relief to the sick poor, came partially into operation in the metropolis and the suburban parishes, and necessarily attracted much attention. These plans were two-fold—those generally adopted *and acted upon*, viz. the system of tender or contract by competition, for large unions, parishes, or

districts; and those not acted upon, but *strongly recommended* to the guardians, in the shape of what have been erroneously and ludicrously called "*Independent* Medical Clubs and *Self-supporting* Dispensaries."

Several meetings of medical men were held, to take into consideration the principles of both plans, and their probable operation and tendency on the poor themselves, on the public at large, and on the profession generally. This is neither the time nor the place to enter upon the subject; suffice it to say, that the whole system as at present constituted, was, after much discussion, deprecated, and condemned by overwhelming majorities.

The feeling was also imperatively forced on the minds of many gentlemen then present, that injuries and degradations could at all times be too easily imposed on the medical profession, and that numerous evils and grievances, which it would be highly desirable to remove, already existed, from the culpable supineness, the absence of union and cordiality among its members, and the want of due attention to its general interests.

It was therefore determined to form an Association, chiefly for the purpose of protecting the rights and privileges of the profession, and of extending its own usefulness and respectability, and the public interests connected therewith. In furtherance of this resolution, a dinner was held on the 27th of October, at the Bridge House Hotel, London Bridge, George Webster, Esq. of Dulwich, in the chair, at which upwards of one hundred medical gentlemen assembled, including many influential members of the profession. A full report of the speeches and of the very interesting proceedings of this meeting was given in the *Lancet* of the 5th of November, and the new association was also favourably noticed by all the medical journals and the greater portion of the daily and weekly press. The nature and principles of the society were set forth in the following propositions drawn up by the chairman and adopted at the dinner:—

1stly. That the medical general practitioners of England and Wales shall form themselves into an association, for the purpose of exciting and cherishing kindly and honourable feelings towards each other, and of guarding, watching over, and protecting the rights, privileges, interests, and respectability of the profession.

2dly. That the society shall be called "The British Medical Association."

3dly. That those gentlemen willing to become members, shall, at an early period, appoint proper officers: such as a president, vice-presidents, secretaries, councillors, committees, &c., and shall form a code of laws for the government of the association, to be submitted to the consideration of a subsequent general meeting.

4thly. That the association shall hold frequent meetings for the transaction of business.

5thly. That it shall oppose all encroachments from without, and all dishonourable or unprofessional conduct among its members.

6thly. That it shall, by all legal means, or by application to parliament, if considered necessary, endeavour to remove all professional grievances, evils, and hardships.

7thly. That it shall protect its members from all illegal or unjust prosecutions.

8thly. That it shall endeavour to form a benevolent fund for the assistance of decayed members of the profession, and for the benefit of their widows and orphans.

9thly. That, to effect these important purposes, subscriptions shall be paid by the members, in such manner as shall be hereafter agreed upon, and donations requested from their friends and the profession at large.

10thly. That the Association shall endeavour to extend its expected advantages over the kingdom, by corresponding with, and inviting the co-operation of, their medical brethren in cities, towns, or local districts; and by recommending them to form themselves into societies, having the same or similar important ends and objects in view.

11thly. That the Association shall by all means in its power, endeavour to promote the welfare, prosperity, and union of its own body in particular, and uphold the dignity, respectability, and usefulness of the whole medical profession.

12thly. That the members and their friends shall dine together at least once a year.

To carry these propositions into effect, several subsequent meetings of the promoters of the Association were held;—a provisional council and president were elected;—and a code of laws was drawn up for the guidance and government of the society. The council then invited, by public advertisement, a general meeting of the profession at Exeter Hall, on the 19th of January last, to receive a statement of their objects and intentions. Notwithstanding the very unfavourable state of the weather and the universal prevalence of influenza, by which medical men were either laid up themselves, or most pressingly engaged, upwards of two hundred practitioners met the council, when the president delivered the following address, and the laws were read by the secretary, and submitted to the consideration of the meeting,

After an animated discussion, and a full explanation had been given of the views of the Association (for which see the Medical Journals for January 21st.), the following resolution was carried almost unanimously, four gentlemen only having opposed it, viz. "That this meet-cordially approving of the objects and intentions of the British Medical Association, as explained in the Laws now read, do adopt those laws; and request that the address from the chair be published, for distribution among the members of the profession." In compliance with the above request, the council now respectfully submit the address to the candid attention of their brethren.

March 10*th*, 1837.

THE LONDON UNIVERSITY COLLEGE.

CHAIR OF CHEMISTRY.

Amongst the candidates for the vacant chair, the name of Dr. Fyfe, of Edinburgh, has been mentioned. Coming from the modern Athens, from which University College has already derived a professor of comparative anatomy, a professor of physiology, and a professor of morbid anatomy, it is not unreasonable to expect, that, if appointed, he might fulfil his duties in as respectable a manner as any of his northern colleagues. Doctor Fyfe has been for many years a private lecturer on chemistry in Edinburgh, and has had a respectable class, in point of numbers, which we need not say, will be one of the best recommendations he can offer to the joint-stock company of Gower Street.

Doctor Boswell Reid is also mentioned as a candidate. His name is before the public as the author of a Manual of Chemistry, with Explanatory Diagrams, which work has received the

particular attention of Mr. Phillips, the translator (*par excellence*) of the London Pharmacopœia. As a practical chemist, we may refer to Doctor Reid's recent experiments, instituted with a view of heating, ventilating, and adapting to public speaking the House of Commons. From the several complaints which have been made by the Members of the House, we are inclined to doubt Doctor Boswell Reid's capabilities in applying science to these important objects: several sitting Members, in particular the Honourable Member for Finsbury, have suffered more this session from cold extremities than upon any former occasions; and all who are in the habit of debating, complain loudly of the difficulties they experience in making themselves audible; which must satisfactorily account for the many misrepresentations which of late have been given by the reporters, as well as the affections of the chest, avula, &c.

Notwithstanding the name of Mr. Phillips is before the council of University College as a candidate, and that his *claims* are strongly pressed by the dowagers of Pall Mall East, we doubt much if his election would prove satisfactory to those who took so *deep* an *interest* in the election of Doctor Sharpey as to send a *diplomatist* from their body, at a considerable expense, to modern Athens.

We again repeat what we mentioned in our last number, that no individual in the three kingdoms is more fitted, as a man of science and an eloquent teacher of chemistry, to fill the vacant chair than Doctor Apjohn; if his stern honesty and unfortunate liberal opinions be not insurmountable barriers to his being associated with the MOCK LIBERALS of UNIVERSITY COLLEGE.

THE NEW METROPOLITAN UNIVERSITY.

DR. JAMES SOMERVILLE, Inspector of Anatomy for London and Edinburgh, is about to be appointed to the important office of REGISTRAR to the Metropolitan University.

At the first meeting of the members of the senate, as we mentioned in a former number of this Journal, it was agreed upon, that a committee of their own number should make out a statement of the duties which would be required of their Registrar, and what candidates for the office would afterwards be advertised for.

We are, however, grieved to learn, that this mode of obtaining a competent individual for the office is stubbornly resisted by Mr. Warburton, an *ultra liberal* member of the senate, who is anxious to provide for one of his private friends, on the plea of having actively assisted him in the parliamentary medical inquiry. If Mr. Warburton's scheme succeeds, it may, indeed, be justly considered as a most inauspicious omen of the fate of the New University.

DR. ELLIOTSON'S OBSERVATIONS UPON PEGSWORTH, THE MURDERER, AND MARTIN LUTHER, IN HIS LECTURES ON THE PRACTICE OF PHYSIC AT THE UNIVERSITY COLLEGE. INHUMANITY OF EXECUTING MONOMANIACS, EVEN FOR MURDER.

SEVERAL individuals of great talent and ability have held the opinion that *murderers* and others who have committed crimes of minor magnitude were *insane*, and that it was *equally* an *insane* act in any legislature to order such criminals to be executed; not to mention the bold and impious deed, it was for man to usurp the great attribute of the GIVER of Life, by taking that which *he* had neither the power to give or to restore. It has been held by many wise and humane men, that no act of

any individual should warrant the taking of man's life by his fellow man, *not even the act of* MURDER; for though it is our abhorrence of the atrocity of the deed which makes us merge the better feelings of our nature in avenging the crime of murder by taking the life of another, yet in this very act we are ourselves guilty of assuming the prerogative of the GIVER of life by *taking* it. In illustration of these remarks, Dr. Elliotson last week, in one of his lectures on the PRACTICE OF PHYSIC (as will sometimes happen with public speakers) wandered somewhat from the subject under consideration, and offered a few observations upon the case of the MURDERER PEGSWORTH, who was hanged on the 7th ult. These were peculiarly interesting to the students, as *many* of them had *witnessed* the execution of that unfortunate individual. Little doubt was entertained by the learned professor that the state of mind PEGSWORTH was in, when he *committed* the deed, was that of an insane person; and his plea of *guilty*, and his *sober*, *religious*, demeanour afterwards, all went to prove this fact. But besides the state of mind a *murderer* enjoys when he commits the act being that of an insane person; thousands of intellectual beings, particularly those who devote their attention and energy with success to one particular calling, are apt to form strange fancies upon other subjects, and to commit acts called, in such persons, *excentricities*, but which sometimes assume a more serious character, and make them amenable to the laws of their country. No *sane* individual, however, would be accessory to such a man's punishment, *by death, or even transportation.* In his usual happy method of interlarding the heaviness of a prosy lecture upon the practice of physic, and in illustration of the above remarks, the learned Doctor related, amongst the hearty laughs of the students, an anecdote of LUTHER, who always supposed, and very rationally, that the greatest *enemy* he had to contend against in working out *his* great work of reformation, was the DEVIL, and of course he was continually racking his brain to find any weapons, in addition to holy writ, with which he might discomfit his indefatigable foe. At length LUTHER's mind became so possessed of this infatuation, that he actually conceived, in addition to *spiritual* means, the enemy was to be assailed by *mortal* weapons, and that the olfactory organs of his SATANIC MAJESTY were extremely delicate in the appreciation of odours, and (contrary to what we would have expected) odours of the most delicate kind; in short, that he abhorred a *stink!* Accordingly LUTHER, when he felt inclined to yield to the dictates of NATURE, was immediately possessed of the idea that the devil was present, and instead of discharging his effective ammunition a distance from his person, took special care to deposit it in his *inexpressibles*, saying, at the moment, "take that, Mr. DEVIL!" and then calmly and *rationally* continued the occupation he was engaged in.

ABSTRACT OF A CLINICAL LECTURE.

NORTH LONDON HOSPITAL.

THE lion, in expressing himself last week in favour of the long straight splint for fractures of the lower extremity, took occasion to offer a few critical observations upon the comparative merits of the big and little, or of the large and small baronets. Sir Astley Cooper he lauded to the "highest heaven" as the "prince" of surgeons, and exhibited some drawings of bony union of fracture of the neck of the finner within the lapsular ligament, which he was enabled to do through the "*kindness* of the *worthy baronet.*" The straight splint he also said met with the fullest approbation of the "*renowned author of Fractures and Dislocations.*" Sir Benjamin Brodie was dismissed by one *observation*, which insinuated the little baronet's obstinacy in adhering to the *old* method of treating fractures.

WESTMINSTER MEDICAL SOCIETY.

SATURDAY, MARCH 18th, 1837.

Mr. Castello's New Instrument for Lithotropsy—Claims of Lithotritists examined—Objection to many of their Instruments.

IN presenting a new instrument for the more safe, rapid, and effective comminution of urinary concretions, I do not

intend to weary the attention of the society by going over all the changes and modifications that have been made in the apparatus and the method since the operation was first established by my excellent fellow-labourer Dr. Civiale, of Paris, in 1824; but I hope I shall not be deemed guilty of any impropriety if, in reviewing my own labours for the advancement of this branch of surgery, I vindicate my right to certain improvements, which have been sometimes attributed to, and sometimes, for selfish purposes, assumed by others.

The society need scarcely be reminded that, notwithstanding the numerous modifications offered to the profession, from time to time, during the period, between 1824 and 1831, that Civiale's instrument continued to enjoy the monopoly of public favour. At this period, an instrument, which had remained unnoticed, having been casually seen in an instrument-maker's shop, suggested the idea of a simpler mode of comminution. The first modifications of this instrument, strange to say, were inferior to the models from which they sprung, and I was myself so struck with the defects inherent in them, that I did not hesitate to proclaim my opinion, that it would not be safe to employ them—an opinion which was, almost immediately after, confirmed by melancholy experience. It was something, however, to have my attention directed to the subject, and as I shall show, by and bye, my opinion was not merely an objection on theory, for it was in discovering the defects and contemplating the dangers to which the use of the percussor, in its then rude state, exposed the patient, that I was successful in converting it into a safe and valuable instrument.

One of the chief defects of the early percussor was, the liability of the anterior blade to be forced up from between the two lateral pieces, from the resistance of the stone, on the one side, and the blows of the hammer on the other. My first effort to correct this was, by placing a plate or button, wrought in its own substance, on the under surface of the moveable blade, with edges so arranged, as to cover and run on the edges of the two lateral pieces. This gave complete security against the dangerous displacement of the moveable blade. But it was inconvenient in use. The society will recognize the practical objections which I was soon compelled to take to the *bouton de sureté*, which I then called it, if it bears in mind what I said, a few nights back, in reference to an instrument for scarifying the urethra, where it lines the prostate gland. It may not perhaps be considered irrevalent, if I repeat the language in which I expressed myself five years ago, respecting the instrument so constructed:

"On first using it, I discovered a defect which had till then escaped my observation. The patient on whom I was operating had a very large stone;—in order to seize it, it was necessary to open the instrument to its full extent, the plague or button was thus drawn within the prostate; the edges of the button being sharp, and not quite close upon the under part of the instrument, the membrane lining the gland was slightly scarified; this was evident from the quantity of blood which was voided (about two ounces) the water previously injected into the bladder coming away, half an hour after, quite untinged with blood."

This circumstance annoyed me at the time, but it proved of great benefit to the patient, for the engorged prostate being thus directly unloaded, he experienced the most marked decided relief. I have since meditated a good deal on the hint thus accidentally furnished, and I am not without hope, that we may not only relieve engorgements of the prostate gland, but often prevent alterations of its structure, by directly unloading it of blood, by means of a safe and proper instrument. I have no case in point to strengthen the presumption, but the one just mentioned; but my hopes derive some support, from what is occasionally observed with regard to the prostate, after the cutting operation.

Four years of observation having fully confirmed the correctness of a view, which was then purely speculative, I hope you will pardon me a digression in favour of a point of practice from which I anticipate the most valuable results.

I was dissatisfied with the action of button, and was revolving divers expedients in my mind, with a view to dispense with it altogether, when on leaving my own house one day in the commencement of the summer of 1832, my attention was attracted to the form of the water-pipe, through which the turn-cock obtains access to the great water-mains in the public streets. It at once struck me, that if I were to make a

rod of the same shape, and have it received in a tube, made open all along the upper surface, to receive the smaller square part of the steel rod, I should have an instrument, consisting of a male and female portion, the one capable of sliding within the other, throughout its entire length. Here was at once all the security that could be desired, as no violence, however great, could separate the two parts of the instrument from each other, while in the action of crushing the stone. In the months of June, July, and August of the year 1832, I used this instrument without intermission. That I had a high opinion of its safety, simplicity, and strength, I candidly confess. That I did not prize it the less, when being one day, on the point of operating on a patient with it in the presence of Sir J. Chapman and others, I heard that gentleman say, "You have made this instrument so simple, that I fear you have taken the bread out of your own mouth." That it should be universally adopted, and that it should supersede all the other forms of the lithotritic apparatus, as it has since done, I had some pleasing anticipations; but that it should now be approved of by those who have been ever ready to sneer at, and undervalue whatever emanated from me—nay, that it should be appropriated as their own, was certainly beyond my expectations.

It may be amusing, and it will certainly be instructive to place the opinions of two gentlemen, both impartial and well acquainted with the details of the operation, MM. Labat and Amussat, in juxta-position with that of M. Heurteloup, who, undervaluing his great natural and acquired advantages, has not felt conscious how much he wronged himself by stooping to insinuations and misrepresentations against so insignificant an individual, as myself.

Soon after this instrument was submitted to the Institute of France to compete for one of its prizes, M. Heurteloup wrote thus in *Gazette des Hopitaux:* "When a modification is produced, the necessity for which is not demonstrated by experience, it amounts to this, that you are capable of admitting, that a surgical instrument is a mere matter of taste, and not of combination, which a person may change through simple caprice. But our art and lithotropsy more especially does not accommodate itself to such a proceeding. The idea of change in an instrument, which has been used with success, must be taken from expeperience, and not from the caprice of a too vivid imagination."

What effect observations of this kind had in rendering the commission of the institute insensible to the value of the instrument, I will not take upon me to say, but they cannot, I am persuaded, have created any great distrust of my vivid imagination, since the instrument is now in the hands of every surgeon, and since two such competent judges as the gentlemen already named.—MM. Labat and Amussat—have had the candour to acknowledge, that "but for my instrument, the lithotritists must have fallen back on Civiale's instrument."

Having once obtained the principle of security, I made no further alteration in the mode of connexion of the two portions of the instrument, than simply to render the male piece angular on both sides, and thus was formed the double groove or slide.

I was now at liberty to turn my entire attention to the formation of such modifications of the beaks as the circumstances of size, hardness, or resistance might require, as regarded the stone, and the conditions of irritability, irregularity, capaciousness, or the reverse, &c. as regarded the bladder.

Various modifications, adapted for such purposes as the operator might have in view, were then constructed, and several of them were presented to the society in its sitting of the 23d of March, 1833. In one of these modifications the blades of the instrument were formed with the blunt edges, like those of a sugar-nippers. This form was thought the most safe, when the stone was large and hard. I had one of these constructed at the request of Mr. King. In the case of Mr. Laughland, in which the stone weighed seven ounces, perhaps such an instrument was indispensable; at least I know that it resisted every attempt to break it with the most powerful of my other instruments, and I ascribe my success in that case to the facility which, by its mechanism, I had acquired of splitting the stone into smaller masses.

I shall not dwell on several other modifications which were presented to the notice of the society on that occasion There is one, however, to which I will take the liberty of alluding. These

various modifications were established on the possibility which I had afforded myself, of adapting to the same tube or female blade, several changes of the male blade. I had thus a sugar-nipper edge, a flat-faced surface, or a concave or spoon surface at pleasure. The object of this last form of the instrument was, as I then expressed it, " to enable the operator, if the bladder were sluggish, or incapable of expelling the detritus, to convert the instrument into a cylindrical box, fill it with fragments, and extract them without enlarging the bulk of the instrument. The importance of this modification it is scarcely possible to over-rate. I had devised it for the case of a sluggish bladder, but I soon discovered how worthy it was of a more general application, and began to use it for the final sittings of all my operations. I gave to it the name of the spoon or scavenger, a denomination under which it will be at once remembered by some hundreds of my brother practitioners, who have witnessed the valuable services it is made to render in clearing out the residuary fragments from the bladder. I had thus, in the years 1832 and 33, perfected a powerful instrument for the large subdivision of the stone; others for the comminution of the masses thus produced, and lastly, a spoon, for the purpose just described. On the occasion to which I have already alluded, I described the whole apparatus in these words: " There is indeed one feature in the construction, which deserves to be noticed, namely, that, turn it which way you will, it can present neither tooth, nor edge, nor crotchet to the bladder." On the numerous occasions in which I have publicly or privately exhibited the action of these instruments, I have always inveighed against the culpable temerity of employing any toothed instrument whatever in the bladder; and in a reply which I wrote in the *Lancet*, to the " Shade of Ledran," who complained that lithotritists made imperfect cures and left fragments in the bladder, I distinctly pointed to the explanation which, at the proper season, it was in my power to give of such disenhancing accidents. The society will now appreciate the meaning of that allusion. Small fragments, strewed about, and being on the surface of the bladder, ought not to be sought for with a toothed instrument. The spoon, or scavenger, is the safe, if not the only eligible instrument for the purpose. The instrument which I now present was made for me in 1833.

After exposing these facts, which belong to, and are registered in the transactions of this society, may I be allowed to make one observation on a work recently published by M. Belinaye, in which a toothless instrument and a spoon are presented as new instruments, and but recently invented by Baron Heurteloup? M. Belinaye, although undertaking the task of writing the history of the operation, must have been ignorant of these facts, else he could not have committed the mistake of attributing the merit which may attach to the invention of these modifications to another, and I trust M. Belinaye is too right minded to persist in an error, which may have been involuntary on his part; I cannot, however, but feel gratified at this additional testimony to the high value of the instruments, which I invented and have employed for nearly five years, as well as at the prospect that now opens for the general adoption of a simple, strong, and safe instrument.

I now come to the instrument for which the attention of the society was bespoken on the present occasion. From the period at which I had used an instrument with a splitting power, I felt conscious that the comminutive system was destined to derive from it a great extension of its applicability; but as I had not been able for a long period to obtain sufficient leisure to make the instrument myself, I allowed the idea to wait for opportunity. I cannot let this occasion pass without paying a deserved tribute of thanks to the house of Savigny, for the prompt and disinterested manner in which it placed its resources at my disposal. On casually mentioning that I had the idea of an instrument, which I thought would extend lithotrity, while it rendered the manœuvre much safer, Messrs. Philps and Whicker at once made the offer of hands and materials, and I now gratefully acknowledge that I am enabled to present this instrument to the profession without having incurred a single penny of expense.

The two blades of the double-grooved lithotrite, now so well known, lie together, or join horizontally; in the new instrument, they join together vertically. They are united by a dove-tail, throughout the length of the shafts till within half an inch of the curve. The curved extremities of both the blades

meet by smooth flat surfaces to form the vesical end of the instrument, which here presents a form not exactly cylindrical, but inclining to oval; the measurement being greater from front to back, than from side to side. The male blade on its convexity is edged; the female blunted and scored on its concavity, to the extent of a line in breadth, for the stone to rest on. When the stone is seized, the force to split is concentrated in the line of the diameter seized, and it is thus split, or cut as with a powerful shears, without distress to the instrument, to the patient, or to the operators. The force of the hands alone, without any rest whatever is very great, if we may judge from the facility with which it splits or divides large nobs of sugar, coal, coke, chalk, grind-stone, &c.

I estimate the value of this instrument, by the number of sittings which it will retrench from the operation. I have just terminated an operation this day, which required twelve sittings of half a minute each. The general sensibility of the patient, an elderly clerygman, being such, as to forbid a more protracted sitting. Had I this instrument six weeks ago when I began his case, I think I should have spared half the number of sittings and perhaps more, although the stone was better than an inch in diameter, and very hard.

Secondly.—I estimate it in the security against fracture, which it not only possesses for itself, but which it confers on the ordinary instruments, which will not in future be required for the description of large calculi.

Thirdly.—The period when the fragments begin to be voided will be shortened. The urethra will not be tormented, nor will the operator be embarrassed by the fragments after the early sittings. The time of expelling the comminuted portions will be deferred till the spliting process is complete. This period therefore will not only be abridged, but as the spoon will have to be brought also much earlier into play, much of the blame imputable to lithotrity for its tediousness in some cases, and urethral accidents, will be wiped away.

Fourthly.—The hammer and rest will be less frequently necessary, and thereby the duration of the operation will be considerably shortened.

The double-slide instrument with its several modifications, having stood the test of five years' probation, and having at last received the suffrages even of those who considered it as the mere offspring of a too vivid imagination, I may, perhaps, be allowed to flatter myself, that I have rendered good service to the profession. I am fain to think that this new instrument will fully realize my favourable anticipations, and that it will also remain, as the first seems likely to do, an acquisition for the science. But whatever may be the value of my labours in this field, nothing can diminish the feeling of pride which I entertain of having the Westminster Medical Society for an approving witness in regard to them both, of the past and the present.

HYDRIODATE OF POTASH IN PARALYSIS.

By J. Douglas, Esq. North Audley Street.

On the morning of the 26th ult. I was summoned to attend a gentleman, whom I found labouring under a first attack of paralysis, accompanied by stupor and hemiplegia of the left side. The attack had been preceded by several days of nervous anxiety. Judging from the history of the case, the weakness of the pulse, his age, and lymphatic temperament, and the general want of tone in his system, which I had observed during several previous illnesses, through which I had attended him, I formed the opinion that there was serious effusion on the brain. I, consequently, determined to avoid depleting measures, and to give a trial to the hydriodate of potash. I, therefore, ordered eight grains of calomel, with ten of scammony, to be taken immediately, and the following mixture:—

℞ *Hydriodate of potash,* half a drachm.
Liquor of potash, two drachms.
Camphor mixture, six ounces. Mix; a sixth part to be taken every four hours.

On the following morning there was less stupor, and the other symptoms were much relieved. I increased the dose of the hydriodate to eight grains, and directed six grains of calomel to be given every night at bed-time. On each succeeding day, I was gratified to find continued improvement. On the fourth day he was able, with assistance, to walk from one room to another, and, on

the eighth day from the attack, he was able to resume his usual occupations.

I was induced to give the hydriodate of potash a trial in this case, from the success with which I had met in a great variety of diseases from its use, and also from its well-known action as a tonic on the general, and as a stimulant on the absorbent system.

I am not aware of any cases yet published in which iodine, or its hydriodate, has been given in paralysis; but, having employed it very extensively in other affections, I always found it so powerful and useful a medicine, that I am in hopes that the introduction of this case in THE LANCET will induce some of my professional brethren to give it a trial in those cases of palsy in which a serous effusion on the brain may be suspected.—*Lancet.*

DEATH FROM MORISON'S PILLS.

AT the Northern Circuit at York, on Thursday, the 16th of March inst., *Thomas La Mott* was charged with causing the death of Mary Rebecca Russell, in August last, at Hull, by prescribing and administering Morison's Pills.

Mr. STARKIE and Mr. BAINES for the prosecution; Mr. ALEXANDER, Mr. COTTINGHAM, and Mr. BLISS for the defence.

Mr. STARKIE, in stating the case for the prosecution, mentioned the opinions which had been given by several judges upon trials of a similar nature with the present. Among others, he cited a case tried before Mr. Justice Alderson, in this city; one before Mr. Justice Bayley, at Lancaster; the well known case of Webb, tried before Lord Lyndhurst, at the assizes here, when he was lord chief baron; and the more recent case of Salmon, at the Central Criminal Court in London; and in all these cases it was given as the opinion of the learned judges, that where a person, ignorant of the science of medicine, took upon himself to administer violent medicines to effect cure, and death ensued, it was a crime amounting to manslaughter.

The following witnesses were called:—

Joseph Russell said,—I am a mariner at Hull. The deceased was my wife. She was nearly 46 years of age when she died, and was a stout woman. She never had very good health long together, being affected with a windy dropsy, and sometimes complained of a pain in the kidneys. She had taken Morison's pills for the last two years; but had never taken more than from four to six. I got them of the prisoner, who is an agent for the sale of the pills. I remember Tuesday, the 9th of August last; before that time deceased had not been very well, but not to say ill. That morning she took either four or six of No. 2; she got worse towards noon, and had to go to bed. In the course of that evening I went to the prisoner to get another box of No. 2 pills, when he asked me what my wife complained of, and I told him that she complained of a pain in the chest and bowels. He said I had better take a box of each, and I took two thirteen-pence-half-penny boxes. He said I had better give four of No. 1 at night, and six of No. 2 in the morning. He said, No. 1 was to search out the disorder, and No. 2 to work it off. I obeyed his direction; they had very little effect. On the 10th he called and saw my wife, when he inquired what she complained of, and she told him, "a pain in the chest, a pain in the kidneys and in the bowels." He directed her to increase the dose to eight of No. 2 in the morning, and six of No. 1 at night. She took these doses, and continued to do so two or three days. He continued to visit her every day. He called on Sunday, the 14th, when I told him she was getting worse, and asked him if the doses should not be increased, and he said he would increase them. I had got some powders from him also, and she was taking them. He said they were to allay sickness. I told him she was getting worse, and that she never took any thing without vomiting: I told him also that she complained of cramp in her bowels and different parts of her body. He called again on the Sunday evening, and told me to go on with the pills as usual, and give her ten of No. 1 that night, and ten of No. 2 in the morning, which I did. He called the next morning and made inquiries, and said he thought the case was an obstinate one, and told me to go on as usual with the pills; which I did. I continued giving them till Wednesday, the 17th, when he said he thought the doses ought to be increased. On Thursday he ordered twelve of No. 2 in the morning. When he called on Thursday night, he said the doses must be increased again, and that I was to begin with fifteen of the pills, No. 2, on the morning of Friday, and

continue them every three hours. She could not take them, but I gave her them as she could take them. On the Friday evening he again told me to go on giving her fifteen every three hours. She complained that night of cramp all round her body, as well as a very severe pain in her head. She did not complain of this before taking the large doses. He continued giving the doses from Friday to Saturday morning, and during that time she took about eighty of No. 2. He called on Saturday morning, and learning what I had done, told me to give her no more that day, but that at night I was to give her ten of No. 1, and ten of No. 2 on Sunday morning. On that morning he called, and I told him she was getting worse. He did not go up to see her. He called again in the evening, when I told him she continued still to vomit and complain of severe cramp and pain in the head, when he said I was to give her ten of No. 1 that night, and ten of No. 2 in the morning, which were the last she ever took. He called on Monday morning, and said he had hoped to see her better; the case was an obstinate one, and if I thonght proper I might call for medical aid, which I did. On the Sunday morning, the prisoner said if a medical man was called in, he would be blistering her at the back of the head. I asked him if he thought the doses were large enough, and if they should not be increased, and he increased them. The first time Mr. Walworth, the surgeon, saw my wife was on Monday evening, and she died on the next day. At the time of her death there was one pill of No. 1 left, and sixteen or eighteen of No. 2. There was also some of the powder left, and I gave them all to the surgeon.

In cross-examination the witness said he had been in the habit of taking the pills himself, but never more than six at a time. He took them for a sprained leg (!), and he thought the pills cured him. He had been married to the deceased nine years. The prisoner made no charge for attendance. He only charged for the pills and powders.

Mr. Sollit, chemist, of Hull, who made an analysis of the pills, was next called. His testimony was nearly the same as that given by other chemists on the former trials.

Mr. Walworth, surgeon, and member of the Apothecaries' Hall, was called in to see Mary Russell on the 22d of August. He continued—I found her labouring under the most excruciating agony, caused, as she said, by cramps in her bowels. Her extremities were clammy, her pulse was wiry, and her mouth foul, and much loaded. Her abdomen very tender to the pressure. She was quite sensible. She complained of pain in her head, and of heat and restriction in her throat, which would follow the use of drastics. I first inquired what she had taken, and I was told she had taken large quantities of Morison's pills. I considered she was labouring under inflammation of the stomach and intestines. I bled her immediately, to relieve her of the spasms, which she called cramp, and I also ordered warm fomentations to the stomach and bowels, mustard plasters to the legs, and a blister to the head. I sent her medicines immediately—an anodyne pill, and a saline and diuretic mixture, and such medicines as I considered proper. I saw her again the same evening. I found her extremities a little warmer, but not much improved. I saw her the next morning. She still complained of pain in the head and abdomen, and was sinking fast, and that night she expired. I found, upon further examination, that the decease laboured under inflammation of the intestines, and that some portions of them were ulcerated. I have heard Mr. Sollit's statement in court, and I am of opinion that the composition of the pills was most injurious in the state of the deceased. On Friday morning an inquest was held on the deceased, and I assisted at a *post mortem* examination with another medical gentleman, who was chosen by the jury, as I declined to fix upon one. The deceased was a fine healthy woman, and not at all emaciated. I observed patches of extravasated blood on the coats of the stomach, and a peculiar softness on the coats, of a bluish colour, and a small ulcer was visible near one of the orifices. The whole coat of the stomach was mixed throughout with mucus. Previous to mortification commencing, there must be inflammation and irritation. I carefully examined the mucous membrane, which was so softened it would give way under the finger. I examined the brain, the dura mater was very much adherent to a portion of the skull, and tore away, and observed the existence of adhesive inflammation,

which must have resulted from previous illness, which was of long standing, and would not at all cause death. The other parts of the body were perfectly healthy. In my opinion, the death of the deceased was caused by the large quantity of pills she had taken, consisting of irritating ingredients. Decomposition had not begun when I made the examination. In my judgment, the pills taken in the quantities described would produce the appearances I have mentioned.

Cross-examined—I have been in business as a surgeon and apothecary, in Hull, for eight years. I was admitted as an apothecary in June, 1834.

The witness was cross-examined at some length, but nothing of importance was elicited. He said that he considered that not more than four grains of gamboge could be given with safety. He understood that the deceased had been in the habit of taking Morison's pills in doses of six at a time, for about two years previous to her death.

Mr. Cassun, a surgeon at Hull, who assisted the last witness at the *post mortem* examination, gave similar testimony, as to the appearances the body presented, and he agreed with him also in opinion as to the dangerous tendency of the pills, in the mode and to the extent administered.

Dr. Wake, of this city, was next examined, and he considered that the pills under the circumstances they were administered to the deceased, had caused death. He added, that he had a very unfavourable opinion of gamboge, and he considered pulp of colocynth equally bad.

After the examination of this witness, the case was closed for the prosecution.

Mr. Alexander then addressed the jury at great length for the prisoner, taking a review of the cases which had been cited on the other side, and contending that the prisoner, having been applied to by the husband of the deceased, was warranted in his conduct to the extent he had gone, as he had advised the use of the pills from his experience of their beneficial qualities, which he had experienced in his own person, independent of other cases; and that his advising recourse to be had to a medical man, when he found the pills had not benefited as he expected, shewed that he acted with caution, and was not blameable for the death of the deceased. The learned counsel concluded by calling witnesses to speak to the benefits they had received from the use of the pills.

A number of witnesses for this purpose were examined, and their testimony was precisely similar to that given on the late trial in the Common Pleas, and upon the other previous trials connected with the pills.

Mr. Starkie replied.

The Learned Judge (Mr. Justice Patteson), in summing up, made reference to the trial of Salmon, at which he presided in the Central Criminal Court, and said it would be very desirable that some final settlement of the question at issue in this case should be come to. After reviewing the whole of the evidence, the learned judge left it to the jury to say whether the prisoner had or had not administered violent medicine, in ignorance of its qualities, and without being qualified to administer it, and that such medicine had caused the death of the deceased.

The jury retired for about half-an-hour, and returned with a verdict of *guilty* of manslaughter, with a recommendation to mercy.

On the following day, *La Motte* was sentenced to nine months' imprisonment.

REPLY TO "O.'s" DEFENCE OF MR. LISTON.

To the Editor af the London Medical and Surgical Journal.

Sir,

It gave me and many others much pleasure to perceive the letter of your candid and able correspondent "O," in a late number of your journal. It is due to Mr. Liston, to acknowledge the statement which "O." has given, of the endeavour which had been made to throw him overboard, is perfectly correct. It has not been concealed by certain parties, that Mr. Liston was brought from Edinburgh for certain purposes, and having now served these, they consider they have no farther use for him; and it is but also right to state, that that gentleman appears to be as heartily tired of his colleagues, as they appear to be of him I beg to add, that the conduct of the Medical Council of the University, has been most illiberal towards Mr. Liston, and

I am surprised that your correspondent, "O," should not have known that they have bound him down in their *bond* that he shall not lecture within one mile and a half of the North London Hospital, and also that, in his clinical lectures, he is bound not to comment upon any case which has occurred in the practice of the North London Hospital, three months after the patient had been removed from the hospital by death, or otherwise. This is the conduct of a body united in liberal principles, and is worthy of a Brougham, a Hume, a Warburton, and a Wakley.

I am, Sir,
Your obedient servant,
P.

WESTMINSTER HOSPITAL.

LITHOTOMY.

Saturday, Feb. 25, 1837.—In consequence of the distressing circumstances at St. Thomas's and St. George's Hospitals, all the surgeons attended to-day in order to consult on a case of stone, in which lithotomy was deemed requisite. The patient had been admitted several months before, under Mr. White. After the lapse of a month he was taken away by his mother, and was re-admitted about a month ago. During his absence the accretion of the stone proceeded rapidly. The operation was performed by Mr. Hale Thomson, who introduced the staff, and after what happened at St. George's, took great care to ascertain the situation of the calculus, and performed the operation in a most exemplary manner, removing *two* calculi, one about as large as a thrush's egg, and the other of about the size of a skylark's. The operation promises the most happy results.

ADVERTISEMENT EXTRAORDINARY.

An advertisement appeared upon the back of one of the Medical Weekly Journals, a few weeks since, to the effect that, "if any young man, possessing anatomical acquirements, and expert at making anatomical preparations, would apply to Longman and Company, Paternoster Row, he would hear of something GREATLY TO HIS ADVANTAGE. As a matter of course, there were numerous applications from young men, who were really expert in the accomplishments required, and from young men *who thought* they were so, and all were referred to King's College.

The *liberal terms* which were offered by the professor were, *a free admission to the physiological lectures, and liberty to attend the demonstrator's orations for the ensuing three years!* It is unnecessary to add, that this *advantageous situation* is at present open, and very likely to remain so.

One of the gentlemen who answered the advertisement, cautiously declined the appointment, as no security could be given him that the medical school would survive *this session!*

TO CORRESPONDENTS.

DEPREDATOR.—We perfectly agree with our friend; but the publication of his *remonstrance* would do no good.

The whole of the STUDENTS' fees is applied to the support of the Hospital; except an annual donation of a paltry 150*l.* to the LION; his exhibitions are certainly worth more money, though a colleague declares that he is no longer useful to them.

CHIRURGUS.—We can allude to the report of the case of Tupper *v.* Brown, in the action for the sum of 5*s.*, which was tried before the Court of Requests. It is injurious to the respectability of the profession to bring such cases before the public.

P. Q. The contest for the vacant chair of chemistry is likely to be a close one. Dr. Fyfe is arrived in town. Mr. Richard Quain ought to be canvassed *privately.*

HOMO. Can our correspondent satisfy us that he will be enabled to verify before a parliamentary committee his assertions? Mr. Clift has already declared that *he* had access to the cart-load of the Hunterian manuscripts. But it has not been there stated how far the orator was indebted to an occasional peep for his "*physiological gatherings.*"

Hunter's paper on drowning, preceded the orator's by nearly half a century.

All communications and books for review to be forwarded, carriage paid, to Dr. RYAN, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

MANCHESTER ROYAL INFIRMARY

THE

London Medical and Surgical Journal.

No. XLI. SATURDAY, APRIL 1. Vol. II.—(1837.)

NOTES OF LECTURES ON PHYSIOLOGY.

By Dr. Fletcher.

Delivered in the Argyle Square School of Medicine, Edinburgh.

No. XVI.

Sensation.

Fat in Fishes, and Spermaceti in Whales—Fat in the Human Subject—Hunger—Various Hypotheses answered—Animals starved to Death—Real Nature of Hunger—Effect of Tobacco on Hunger—Dirt-eating Negroes—Cramp of the Stomach—Thirst not dependent on Dryness of the Throat—Cause of the great Thirst in Fever—Anson's Voyage—Animals which do not drink—Miscellaneous Sensations—Frequent passing of Urine by Dogs—Stimulus to Venery—Worms in the Vagina—Composition of Philtres—True Nature of the Sensation in Sexual Intercourse—Erection of the Nipple and of the Penis—Effects of Excessive Desire—Desire in Females—Sleep-walking—Error in Shakspeare—Mrs. Siddons as Lady Macbeth—Definition of Instinct—Instinct in Plants—Sensation in Plants—Instinct of the Ant and Bee—Reason in Brutes—Proofs of it in Hens, Cats, Foxes, Hares, and Deer—Differences between Instinct and Reason—Explanation of the Sixth Sense—Cause of which it depends—Effects of Intemperance on Sensation—Organs of Smell in Negroes and Wild Indians—Conversation of the Deaf and Blind—Distinguishing Colours by Feeling—Case of a Blind Sculptor—Busts made in the Dark—Cases of Sight by the Occiput and Epigastrium—Capability of seeing Internal Organs—Animal Magnetism—State of a Person in Reverie—Faith necessary to the Success of Animal Magnetism—Its failure in the Case of Medical Students—Religious Trances—Case of Magnetic Deception—Share which the Imagination has in it—Somnambulism—Catalepsy—Cases of Persons walking through London while Insensible—Operations performed without being felt—Acapuncture, Moxas, and Amputation—Husson, on Animal Magnetism—Summary of its Phenomena—Prophecies in Somnambulism—Application of Somnambulism to the Practice of Physic—Bertrand on Animal Magnetism—Cases which he treated—Colours of the Magnetic Fluid—Anecdotes.

One of the main reasons for fishes having much fat under the skin, is probably to diminish their specific gravity; and, therefore, the whale has spermaceti in the head, to keep it above water. In the human body, the fat amounts to about one-twentieth of the whole, or about seven or eight pounds. It is more abundant in females than males. A Roman bride, upon first entering her husband's house, used to touch the door-posts with fat, as an omen of fertility. Hence she was called *uxor*, from *unxor* (an anointer).

Hunger is a modification of the sense of touch. It has been, at different times, attributed to the following causes:—1. Emptiness of the stomach. 2. Attrition of the coats of the stomach. 3. Action of the gastric juice. 4. Influx of the bile. To all these theories there are objections. In animals starved to death, Magendie found no motion of the stomach. Hunger seems to be owing to a contraction of the muscular coat of the stomach. In fact, it is a

kind of cramp; and is increased by every thing which tends to promote muscular contraction in other parts of the body. It comes on at the beginning of gastrodynia, tetanus, and other spasmodic affections: and is relieved by opiates, and other antispasmodic remedies. The Indians use tobacco boluses for this purpose. There are many stories of sailors, who have been cast away, bearing hunger better if they had a quid of tobacco. Dirt is sometimes swallowed by negroes, to prevent contractions of the stomach. The loss of appetite from bad news, supports this view of the subject. The loss of nervous influence, gives rise to a state of the muscular coat of the stomach, the reverse of spasm. It has been objected to this theory, that the stomach of animals starved to death, has not been found smaller than that of others. But in cramp of the stomach, the capacity of the organ is not diminished, as is proved by the large quantity of liquid which is often swallowed in such cases. We cannot explain the cause of these periodical returns of hunger, any more than we can that of the periodical flow of the menses, or of the periodical secretion of semen, which is seen in the case of some animals.

Thirst does not depend on dryness of the throat. The case related by Gardner proves this. A man had cut his throat in such a way as to lay open the pharynx; and several buckets of water were swallowed but passed out by the wound, and did not cure the thirst. If the seat of thirst were in the throat, acids would not relieve it more than other kinds of drink. It seems to be dependent on some acrimony of the secretions; and is therefore much greater in fevers, and other diseases. It is relieved by applying water to the skin; and in which case it appears to act by sympathy; for it produces its effect more quickly than could be accounted for by absorption. The effects of thirst were strikingly exemplified in Anson's voyage. Some people, while in health, have no thirst at all. A case is related in which a man drank only once in three or four days. Mice, rabbits, and some other animals, do not drink.

Various other sensations, such as those which produce a desire to breathe, to void the stools or urine, to copulate, &c. are all modifications of touch. The dog seems to husband his urine. He discharges it, not at once, but in small quantities; and selects places for doing so with great care—apparently choosing those in which another dog had been before him.

The stimulus to venery in women, is a collection of blood in the genital organs. Any mechanical irritation there, will have the same effect; as from worms in the vagina. Cantharides are the chief ingredients in philtres. The gratification in sexual intercourse is of so peculiar a character, that some have thought it to be a new sense. But it is only a modification of touch; the parts being so constructed as to be capable of putting the nerves very much on the stretch. The erection of the nipple in females, as well as that of the penis in males, is from mental emotion. If desire is excessive, it exalts the body, and depresses the mind; as is seen in deer, and other timid animals during the rutting season. The females of all animals have less desire than the males.

In sleep-walking, the senses are alive; and Shakspeare is in error, when he represents the sight as being lost in such circumstances. Mrs Siddons, when she appeared as Lady Macbeth, though she was right in smelling to the blood, was wrong in not looking at it when she pointed it out. Persons walking in their sleep have all their senses, but are without consciousness.

Instinct is an involuntary impulse to the performance of some action, which procures some good, or avoids some evil. It must be from a feeling of uneasiness; as when a plant turns to the light; and if a plant has instinct, it must feel. Plants die if prevented from performing the actions necessary to reach the light, assurely as animals die if prevented from satisfying their hunger. The closure of the petals of flowers, which is sometimes adduced as a proof of instinctive action, is probably a *cessation* of action from the withdrawal of light and heat. The desire for particular kinds of food, in different animals, is from their having different wants, according as their organization varies. In the same way we sometimes feel a desire for *acids*, and at other times for *alkalies*, according to the state of the stomach, without knowing that they are proper. The ant and the bee lay up food, not because they wish to eat it by and by, but because not to lay up food would leave a desire ungratified.

Some of the actions of brute animals, are *reasonable;* as when hens lay their eggs in a different place, if the place they had first chosen be disturbed. Of a similar description are the stratagems of cats to preserve their young; and those of foxes, hares, deer, and other animals, to escape their pursuers. These stratagems are not due to instinct; for they are only practised by the old and experienced animals. Instinct and reason differ in the following particulars: I. *Instinct.* 1. It arises from *sensation.* 2. It is *uncontrollable.* 3. It is *incapable* of adaptation to circumstances. 4. It is *unsusceptible* of improvement. II. *Reason.* 1. It arrives from *thought.* 2. It is *controllable.* 3. It is *capable* of adaptation. 4. It is *susceptible* of improvement. The mere arrangement of matter is not an evidence of mind, or man would be placed very low in the scale of creation; and his prospect of immortality would rest on no other basis than that of animals, plants, or even crystals. I agree with Descartes, that plants, with respect to *all* their actions, and animals, with respect to *many* of them, are mere machines, acting without thought.

When all the functions of the body go on properly, we feel well and happy; but if they do not, we feel uneasy and "out of sorts." This general feeling has been called *cœnæsthesis*, or a "general sense." Much of this depends on the stomach; and when that organ is in a healthy state of tension, it makes the person look well; whereas, after a debauch, we feel incapacitated for mental exertion, and are dissatisfied with all around. It is only a modification of *touch* or general *tact.*

Negroes and native Americans have large organs of smell; comprising the Schneiderian membrane, the olfactory nerves, and the cerebral *testes.* Borelli gives a case in which a *deaf* man could hold a conversation by observing the motions of the other speaker's lips. Many instances of this have occurred, and also of cases in which language could be distinguished by *feeling* the speaker's lips. There was likewise an instance of a man who could distinguish *colours* by their different degrees of *roughness;* but white and black he pronounced to be much the same in this respect. Vodeterrano, a *blind* artist at Rome, in 1636, could make busts very accurately after repeatedly passing the *hand* over the face he was to copy. As vision was quite extinct, of course he worked equally well in a *dark* as in a *light* room.

Rostan says, that a man under the influence of animal magnetism, could tell the hour by a watch placed some inches *behind the occiput.* Another author gives the case of a young lady, who referred the seat of sight and the other senses to the *epigastrium;* there are many strongly established stories of people seeing the *internal* organs of their body. I do not believe these stories; but, if true, they demonstrate that in such cases, the *fifth pair* of nerves (which is in communication with the internal organs in question) must stand in the place of the *optic* nerve, and will thus impart sight. We cannot tell why, in *ordinary* circumstances, the *optic* nerves convey *sight*, and the *auditory* nerves *hearing;* and therefore we cannot be sure that in *extraordinary* circumstances, other sensific nerves may not do the same. Frequently, however, animal magnetism does not *excite* the senses, but *paralyzes* them. Thought becomes so intense as to overcome them; and the person lives in a reverie. Faith in the efficacy of animal magnetism, is quite necessary to its success: for I have seen many medical students undergo the manipulations, laughing at the person who performed them.

I think the state of a person under the influence of animal magnetism is precisely that of a religious trance. A woman exhibited all its usual effects, by making her believe a magnetiser was practising on her on the other side of a door, although, in reality, there was no one there. This decidedly proves the share which the imagination has in it. During the reverie produced by animal magnetism, the pupils are unconscious of light, and the nostrils are insensible to the strongest ammonia. This state has been absurdly called "somnambulism;" but in the latter, as we have already explained, the *senses* are in full vigour, although *consciousness* is suspended. Mason Good relates cases of persons who, in a fit of catalepsy, walked from one end of London to another; and, on recovery, were surprised to find where they had got to. The senses of touch and feeling are completely suspended, as well as the rest, in the magnetic reverie. Needles have often been thrust into the flesh without giving pain.

Recamier applied a moxa with the same result, and Jules Cloquet amputated a mamma, without the patient's feeling the operation. A woman at the *Hotel Dieu* had a pistol fired near her ear, but she finished the sentence she was uttering without giving any *sign of having heard* the noise.

In illustration and confirmation of the above interesting sketch of animal magnetism by Dr. Fletcher, we translate the following concise summary of the phenomena observed in somnambulism, as enumerated by M. Husson, who instituted a course of experiments on the subject, at the *Hotel Dieu*, in the year 1820:—

"When somnambulism is produced by animal magnetism, the person who is the subject of the operation acquires a prodigious extension of the powers of *sensation* Many of his external organs (generally those of sight and hearing) have their powers suspended, and all the operations which depend upon them are performed *internally*. 1. He has the eyes closed, and does not see with them at all; neither does he hear anything with his ears; but he sees and hears, notwithstanding, better than another man who has all his senses unaffected. 2. He hears and sees only those with whom he is in immediate communication. He sees only what he looks at; and, in general, he looks only at the objects to which his attention is directed. 3. He is subject to the will of the magnetiser in everything which is not likely to do him harm, or which does not contravene his notions of justice and truth. 4. He is acquainted with the will of his magnetiser. 5. He is sensible of the magnetic fluid. 6. He *sees*, or rather he *feels*, the interior of his body and that of others, but, in general, he takes cognizance only of those parts which are not in their natural state, and which therefore disturb the harmony of the system. 7. He regains the recollection of things which he had forgotten while awake. 8. He has presentiments and foresights, but they are limited in extent, and may sometimes prove erroneous. 9. He expresses himself with surprising facility. 10. He is not exempt from vanity. 11. He improves, as he goes on, for a certain time, if guided with skill. 12. If badly directed, he loses himself. 13. When he returns to the natural state, he loses all recollection of all the sensations and all the ideas which he had in the state of somnambulism, so that these two states are as different the one from the other as if the somnambulist and the same man awake were two different beings.

"It has often happened," continues Mr. Husson, "during this singular state, that the senses have become so paralysed,—so entirely closed to external impressions, that a bottle of concentrated liquid ammonia (containing several ounces) was held under the nose for five, ten, or fifteen minutes (or even more) without producing the slightest effect—without disturbing the respiration in the least, and without even causing a sneeze. The skin, likewise, was completely insensible; even when it was pinched till it became black. Nay, it was absolutely insensible to the burning of a moxa, and to the severe irritation produced by hot water well charged with mustard;—a burning and an irritation which were acutely felt, and extremely painful, whenever the skin regained its natural sensibility. Modern observer assures us, that in this state of magnetic somnambulism, patients have acquired by intuition an accurate knowledge of the nature of their complaints, and of those of the persons with whom they are placed in communication; and likewise of the kind of treatment proper to be employed in the two cases. It was observed at the *Hotel Dieu*, in 1820, that the patients in a state of somnambulism, could be cauterised without feeling it; and at the *Salpetriere*, in 1821, they acquired such a knowledge of future events, that females, well known and long under treatment for epilepsy, were able to predict (twenty days beforehand) the day, the hour, and the minute, when the epileptic paroxysm would take place, and the paroxysm did so take place accordingly. This singular faculty might be advantageously employed in the practice of medicine."

The above is taken from the complete and comprehensve treatise of Dr. Bertrand—"*Du Magnetisme Animal en France.*" The following five sentences sum up his opinions, after travelling over the whole extent of the subject:—

"1. Man is capable of falling into a particular state, totally different from all those which have been recognized hitherto; a state which in its nature is

unique, although liable to present itself in very different aspects. 2. This state, which I designate by the general name of *extasy*, is the same which has been observed among those who, in former ages, were said to be "*possessed*," and among the "*inspired*" of various religious sects. 3. This state is not a disease, properly so called, although certain diseases (such as convulsive affections) eminently predispose to it; and it never takes place except in certain determinate circumstances. 4. The most powerful of these circumstances is an exaltation of the nervous system, carried to a very high degree. 5. This state of *ectasy* has not ceased with the ages of ignorance, but was prolonged throughout the whole course of the eighteenth century, and has not ceased to be produced daily, before our eyes, in the proceedings of magnetisers, in whose hands it has remained for forty years, unknown or mistaken by philosophers."

Dr. Bertrand illustrates the subject by a great variety of interesting anecdotes. "I was requested by a female practitioner of magnetism, to visit a patient in a state of somnambulism. I was introduced in silence into the room in which the mysterious operation took place; and beheld a female, almost forty years of age, sitting on a couch, with her head laid on the bed, apparently asleep. My conductor addressed to her several questions; to which she replied without opening her eyes, and immediately relapsed into her state of slumber. All this was continued for about half an hour; when the patient was awakened by a few simple gestures of the magnetiser. She then opened her eyes, answered with a natural air to the questions I proposed, and assured me that she had not the least recollection of any thing that had passed.

"A young female, who had long suffered under a hysteric affection; of which, however, her friends did not trust themselves to say much, because they were not very sure that the devil had not something to do with it. Her parents wished to have recourse to animal magnetism; for which these good people had no other motive than the supposition that so strange a malady could not be better treated than with a remedy equally strange. I was present at the operations, which were performed by the magnetiser mentioned in the preceding case. During the first few minutes of the first sitting, the patient exhibited some slight convulsive motions; she then fell asleep and her slumber was so profound, that she heard nothing of what was said to her, even when spoken in a loud voice close to her ear. In the succeeding sittings the same phenomena occurred, only that the convulsive motions were not long in disappearing; and, for twenty days, this was the only appreciable change which took place in the magnetic effects. Finally, on the twenty-first day of treatment, the usual operator being obliged to be absent, I took his place, and magnetised the patient with all the determation I could assume, being anxious to see if I could produce any effect. I succeeded beyond my hopes: the patient fell asleep in less time than usual, and when I spoke to her she answered me without waking; she told me that her doctors had killed her by giving her improper medicines; and that if she had been magnetised from the commencement of her disease, she would have been cured long ago.

"In subsequent experiments by means of a strong will, and gestures very insignificant in themselves, I was able to produce very marked phenomena, which did not at all resemble those which we are accustomed to regard as the simple results of imagination. Among these effects, a very curious one was somnambulism. Several of the patients in whom I produced this state, assured me they observed the fluid by means of which I acted upon them, issuing from my fingers; and (which at first sight seemed very conclusive) they all pretended to see it of the same *colour*. This colour *was a fine blue*."

OPERATING AGAINST TIME.

"Having been severely censured by some of the *surgeons* of the village," says Dr. Hosack, the distinguished clinical professor of New York, "for keeping my patient upwards of forty minutes on the operating table, I feel myself constrained to ask the same question which Mr. Bloomfield, of St. George's Hospital, addressed to a pupil, who pulled out his watch at the moment he was about to commence his

operation—"What, Sir, do you intend to measure the movements of my hand, as you would a horse's feet;" adding, "Sir, let me tell you, that the operation is always *soon* enough done that is well *enough* done." Macbeth, when about to commit murder, says

"————————'twere *well*
It were done *quickly*."

But this should never be the surgeon's motto."—*American Medical Register.*

ACTION FOR PENALTIES UNDER THE APOTHECARIES' ACT.

Apothecaries' Company v. *Nice.*

This case was tried on Tuesday, the 21st March current, at Shrewsbury, before Mr. Baron Bolland and a special jury.

It was an action brought by the master and wardens of the Apothecaries' Company to recover from the defendant, a young man who resides at Broseley, in this county, nine several penalties of £20 each, for having practised as an apothecary without being duly qualified for that purpose.

Mr. Serjeant TALFOURD and Mr. RICHARDS conducted the case for the plaintiffs, and Mr. MAULE and Mr. WHATELEY for the defendant.

Mr. Serjeant TALFOURD, in stating the plaintiff's case, said that this action was brought in discharge of a very important duty which the legislature had thought fit to impose upon the Company he had the honour to represent. At an early period, apothecaries were only persons who sold drugs and compounded medicines which were prescribed by physicians; but, in the year 1815, the legislature, finding that they had gradually become general practitioners, and that the public required a guarantee that those by whom they were attended should be competent and skilful persons, passed an act of parliament, by which the Society of Apothecaries was incorporated, and which directed a board of examiners to be appointed, without whose certificate no person should thereafter be allowed to practice as an apothecary who had not been in practice previous to the passing of the act, and any person guilty of a breach of those provisions subjected himself to a penalty of £20 for every offence. In the present case it would be proved that the defendant had, on several occasions, acted as an apothecary without possessing the certificate which the act of parliament made necessary, and, by so doing, had rendered himself liable to the penalties sought to be recovered in this action.

A great number of witnesses were called to establish the nine different cases in which the defendant was sought to be charged. It appeared from the evidence, that the defendant, who had previously lived as assistant to a surgeon and apothecary, at Broseley, had taken a lodging in the place, at the house of a Mrs. Walker, and that on persons applying to him for advice and assistance, he administered medicine, and regularly attended them as an apothecary. He had, however, no shop, and kept his drugs in his bed room. An attempt was made, on cross-examination, to show that in each case the defendant had attended as a surgeon only, and not as an apothecary; but it appeared that some of the patients had been attended for typhus fever, others for consumptions, and that the defendant's practice was of a general nature. It was also proved that he had purchased a quantity of drugs at a sale, and that from time to time he procured medicines from a chemist, which he made up and administered himself. All the witnesses stated that he had been generally very successful, and that his manners were uniformly kind. Several bills were produced in the handwriting of the defendant, which, after specifying the days of his attendance and the quantities of medicine administered, concluded with a specific charge "for medical advice and attendance," but had no sums affixed against the items which related to the medicine supplied.

Mr. MAULE addressed the jury for the defendant, and contended that almost all the cases in which the defendant was proved to have administered medicines were purely of a surgical nature, in which case he would not be liable under the act of parliament in question. He submitted, also, that the other instances were cases of extreme urgency, where, if the defendant had not rendered his prompt assistance, no other being immediately at hand, the parties would have died.

Mr. Baron BOLLAND summed up

the evidence. The jury found a verdict for the plaintiffs for three of the penalties claimed, and for the defendant upon the remainder.

This trial occupied the whole day, and was not concluded until a late hour.

A CASE OF PADLOCK SWALLOWING.

In a recent number of the *Caledonian Mercury*, it is stated that considerable interest has been excited in Edinburgh, amongst the members of the medical profession, by the admission of a patient into the Royal Infirmary, who reported that she had swallowed a brass padlock! The patient's history was as follows:—About five weeks ago, whilst amusing herself with a friend, she put the padlock into her mouth, and it instantly slipped down her throat! An emetic was soon after administered, which she found great difficulty in swallowing: vomiting took place immediately afterwards, accompanied with great pain in the throat and a discharge of blood. During the succeeding 24 hours she felt as if the padlock were wedged in the throat, and experienced a painful sense of suffocation, after which she felt little pain or inconvenience, and concealed the accident from her friends until Sunday, the 19th ult. She was soon afterwards admitted into the hospital as a patient of Professor Lizars, who, from the moment of her admission, was of opinion that the woman's report was accurate; but, doubt existing in the minds of some of his colleagues, he deferred performing the operation for the extraction of the foreign body, which, in his opinion, was necessary to place the woman in safety. Saturday night the poor woman was attacked with violent vomiting, accompanied with a feeling of suffocation and great pain in the throat, which continued all night. Dr. Johnston, Professor Lizars's hospital assistant, was called at half-past two, on Sunday morning, and, finding the patient in imminent and immediate danger, he instantly, and unassisted, introduced an instrument, invented for the purpose, into the gullet, and succeeded in extracting the padlock, to the immediate and complete relief of the sufferer. The padlock weighed upwards of six drachms (nearly an ounce), and measured an inch and an eight in breadth, and one inch and two-thirds in length; with the exception of the iron part being covered with rust, it was no way changed in appearance.

PROCEEDINGS

AT THE

EIGHTEENTH ANNIVERSARY MEETING

OF THE

HUNTERIAN SOCIETY.

REPORT,

PRESENTED BY THE COUNCIL TO THE EIGHTEENTH ANNIVERSARY MEETING OF THE HUNTERIAN SOCIETY, HELD AT NO. 4, BLOMFIELD-STREET, FEB. 8, 1837.

THE Council trust there is abundant ground for offering sentiments of gratulation in now rendering a statement of the proceedings of the Society during the session which has just closed. On a review of the discussions which have taken place at its numerous meetings, some advantage may be expected from an analysis, such as that now presented, of the essays and cases, the arguments and opinions which have been advanced. Not only does the memory recall facts, and inferences deducible from those facts are afresh brought before the mind; but the benefits resulting to a profession, the practical conduct of which is chiefly based upon inductive experiment—from associations in which in the way of easy conversation, observations are communicated, difficulties stated, physiological and pathological facts discussed, or therapeutic methods suggested and compared,—these benefits are enforced upon the minds of those who have not duly considered them. Every day, however, diminishes the number of such, and new accessions to the body shew, that the feelings of your Council on the value of such institutions are appreciated.

Of all the departments in Natural Philosophy, using the term in its extended sense, that of Physic or Medicine has ever occupied a pre-eminent position. To every man whose mind is

not imbruted by sensual pleasures, the acquisition of knowledge is delightful for its own sake. To men of liberal education, the contemplation of science and art offers the purest sources of enjoyment. How much more when to such motives are added the personal and relative advantages derived by the medical man in augmenting his resources against disease! Personal observation, books and lectures are undoubtedly the chief modes of obtaining information: but colloquial discussions, such as those held in the meetings of the Hunterian Society, maintain an important rank among the modes of gaining—and what is often of not less value, of imparting information. The Council are reminded that Anniversary Meetings are the periods when the charge intrusted to them over the general affairs of the Society is accounted for. This trust they surrender with pleasure, entertaining a hope that the confidence placed in them, will be considered to have been not unworthily reposed, when the great improvement in the state of the library, and in its availableness are considered. Indeed, the chief novel feature during the past year, is the preparation of a new catalogue of the books in the possession of the Society, which will shew how much the number of its volumes has been increased by purchase and donations, though still there is ample shelf-room for further additions. Your Council would impress the importance of this Medical Library upon the attention of the Society, since it is the only one existing at the eastern part of London, accessible to practising members of the profession.

With respect to finances, the Council are able to speak with the utmost satisfaction, notwithstanding that the treasurer has been overdrawn to a trifling amount. The exigencies of the year have been unusual, but the expense which has been incurred in printing the catalogue is not likely to recur for many years; and it has been, in no small degree, gratifying to your Council, to have been called on to provide new seats on account of the increased attendance at the Society's meetings. The subscriptions are now due, and will speedily replenish the exhausted treasury.

From among the very numerous topics of conversation and essays, the following are selected as the more important, and as presenting features of interest, and in some respects of novelty.

THE NERVOUS SYSTEM.

Epilepsy. — This subject was discussed at some length, and the use of digitalis, in combination with some forms of chalybeate, strongly recommended; on the ground that the two medicines probably so modify the action of each other, as to enable the system to bear the sustained operation of both for a longer period than it would allow the exhibition of either singly. The advantage resulting in cases of Epilepsy with anæmia from vegetable diet was also strongly urged.

Some of the many causes of Epilepsy were adverted to; as teething—intestinal worms—blows—affections of the mind—a plethoric state of the brain—and spiculæ of bone irritating the cerebral structure.

In illustration of the efficacy of steel and fox-glove, the first case adduced was that of a girl aged 15. The catamenia had not appeared, but in other respects she seemed healthy. The epileptic seizures, with strong convulsions, came on without warning about every ten days, and left soporific effects for several hours afterwards. On the 13th of November, 1835, she began to take pills containing one grain of digitalis, one grain of the sulphate of iron and three grains of myrrh, three times a day. These were continued with occasional interruptions, and an increase of the proportion of iron till the time when the case was detailed: viz. October, 1836. She had then gradually improved, and except a slight fit on the 1st of August, after considerable excitement, had been free from attacks for a period of more than twenty-six weeks. Since the end of April, the pills had been administered only twice a day, and consisted of one grain of digitalis, with two of iron. The second was that of a young lady, aged 20, in whom the catamenia had appeared only twice. About three years previously, she had been subject to frequent faintings, and for nearly a twelvemonth to attacks, which first appeared hysterical, but soon proved to be unequivocally epileptic. Sometimes she had eight in a day. She never suffered from headach, but had

frequently a constriction across the forehead. She was directed to take sulphate of zinc with gentian, three times a day, and purgative pills, but without benefit. The sulphate of iron was consequently substituted for the zinc, and blisters twice a week to the loins. A fortnight having elapsed without improvement, a combination of one grain of digitalis, and three of sulphate of iron was given, three times a day; tartar emetic ointment was also rubbed on the head. This plan was commenced on the 5th of February, 1835, and continued, with occasional suspension of the digitalis, till the last report of the case; viz. July 21st, 1836, with progressive improvement, so that at that time she had been free from all attacks for nearly eleven weeks. For some time she had taken only one pill daily.

In a third case, under treatment, when the essay was read, (the catamenia being sometimes delayed, sometimes painful) the young lady, in the beginning of August, had frequently twenty-five attacks during the day and night. The same plan was pursued as in the above cases, with due attention to diet, &c. and the attacks had diminished to four or six in a day.

In neither of these instances had the catamenia been established.

Cerebral Congestion,— occurring under circumstances of peculiarity. A boy nearly seven years old, having a remarkably large head, and of a sensitive disposition, was much impressed by the casual remark of a gentleman, that "the child would not live to be seven." His mind dwelt much on the circumstance, and about three weeks afterwards he was seized in the night with derangement of the cerebral functions; he sang and talked incoherently, and afterwards vomited. The next morning he was better, but grew worse during the evening, and passed the night in much distress. Soon afterwards he could not swallow, and was nearly unconscious; his face was livid and his pulse extremely feeble. Depletive and evaporant means were employed in vain. He died on the third night. On examination, the veins of the pia mater were found extremely loaded: those dispersed on the lining membranes of the ventricles were also very turgid; and within the ventricles, effusion to a small extent took place. In the right cavities of the heart there was also a a large concretion of fibrin. Nausea and occasional vomiting were shewn to be sometimes the chief symptoms of this disease in a chronic form; it was also remarked that a loaded condition of the brain and meningeal sinuses in connexion with the previous history, indicated an altered quality of the blood.

Hydrocephalus.—A boy, æt. 7, whose head had been punctured for *hydrocephalus* in his infancy, was exhibited to the meeting by the operator. Thirteen ounces were then drawn off, and six weeks afterwards the same quantity. Previous to the operation he was blind, and almost constantly convulsed. The relief was immediately great, and the boy is now intelligent. Several other successful instances were adduced, though doubts were expressed, whether in these cases the disease was removed, or only relieved.

Paraplegia.—Case of a man Æt. 45. He had stricture in the urethra, and fistula in perineo: when getting better from these, he was seized with paralysis of the left leg, and afterwards of the right. He died paralytic of the lower half of his body, accompanied with low typhoid fever. On examination, no cause was readily discovered which accounted for the paralysis. However, when the spinal marrow had been removed, on passing the finger down the canal, a contraction between the second and third lumbar vertebræ was detected; its cartilaginous structure was ossified, and the canal was narrowed to half, or a third, of its original calibre. As, when ossification has occurred, even palliation can scarcely be expected, means of prevention were taken into consideration. Many instances were adduced in young or athletic persons, where relaxation of the spinal ligaments had followed undue or violent exertions, which precluded the act of walking, and demanded the horizontal position to be long maintained. When the diagnosis of such cases is established (which, however, is often difficult, as there are few decisive symptoms) recovery may be predicted if this plan is early enforced; otherwise ossification of the weakened ligaments ensues, and the spinal marrow is permanently oppressed.

(To be continued).

AN ESSAY
ON
THE ORIGIN AND NATURE
OF
TUBERCULOUS
AND
CANCEROUS DISEASES.

READ TO THE MEDICAL SECTION OF THE BRITISH ASSOCIATION, ON THE 23RD OF AUGUST, 1836, BY RICHARD CARMICHAEL, M. R. I. A., CORRESPONDING MEMBER OF THE ROYAL ACADEMY OF MEDICINE OF FRANCE, ETC. ETC., AND CONSULTING SURGEON OF THE RICHMOND SURGICAL HOSPITAL, ETC. ETC.

THE following paper contains topics of sufficient importance to occupy volumes, and the author might have thus extended it, had he made use of the various facts within his knowledge capable of illustrating one of the most important subjects which can engage the attention of medical men, namely, the true nature of tuberculous diseases. But it was necessary to compress the statement of the facts and views he had to adduce within the narrow compass of a communication, fitted for the small space of time allowed for the reading of a paper to the medical section of the British Association. It is his intention to follow up this interesting subject, by availing himself of every opportunity which offers of *post mortem* examinations in the extensive hospitals of the House of Industry of this city, which contain between two and three hundred patients; of examining animals which die of tuberculous diseases; and of extending his experiments upon living animals, in order to ascertain how far unhealthy regimen is capable of producing tubercles, and of learning, if possible, whether they are capable of absorption by a change to a healthy regimen, which engages the important question, whether or not tuberculous diseases admit of a cure; and he hopes that others, unbiassed by pre-conceived notions, will favour those views by pursuing the same interesting investigation. It will, of course, be necessary to recur to the use of the microscope, and to adopt the most minute injections.

This paper is given to the public as it was read at the British Association, with a postcript, however, containing such objections as were made at the time to the author's views, and his replies to these objections.

When we consider the mortality that arises from tuberculous diseases, which, on a rough calculation, may be estimated, in these countries, where so many, from various causes, lead unnatural sedentary lives, at a fourth of the entire population, the vast importance of the subject ought surely to demand above all others the attention of the medical section of this association.

I shall not make any farther preliminary observations, but rush at once *in medias res*, and endeavour to condense, as closely as I can, a subject upon which so much has been written, but which, in my mind, has failed to afford any satisfactory explanation of the true nature and origin of those bodies termed tubercles: for, without a true knowledge of both, we are not likely either to cure or prevent this, the greatest pest of mankind. Our present knowledge respecting tuberculous diseases is chiefly derived from the writings of Bayle, Laennec, Andral, Chomel, Louis, and Lombard amongst the French, and from Stark, Baron, Carswell, Todd, and Clarke amongst our own countrymen.

With respect to the appearance and structure of tubercle, I shall first give, as briefly as possible, Laennec's description, and afterwards that of Dr. Carswell. The celebrated Laennec observes, that the matter of tubercle may be developed in the lungs under two principal forms, that of insulated bodies and infiltration; and that whatever be the form under which the tuberculous matter is developed it presents at *first* the appearance of a grey *semi-transparent* substance, which gradually becomes yellow, opaque, and very dense, so much so, that Bayle regarded tubercles in that state as accidental cartilages. Afterwards the tubercular substance gradually acquires a fluidity nearly equal to that of pus; it being then expelled through the bronchi, cavities are left, vulgarly known under the name of *ulcers of the lungs* and vomicæ, but which Laennec designates *tuberculous excavations*.

He then proceeds to describe, with the accuracy of the most assiduous and patient observer of nature, the various forms of tubercle. Two of them pre-

sent themselves under the form of *compact, rounded, insulated bodies;* two others he terms tuberculous infiltration, in which the tuberculous mass presents no regular form, and is of a consistence between jelly and cartilage.*

"Tuberculous matter," says Doctor Carswell, "is a pale yellow, or yellowish grey, opaque, *unorganized* substance, the form, consistence, and composition of which vary with the nature of the part in which it is formed, and the period at which it is examined."† It is to be found most frequently in the mucous system of the respiratory, digestive, biliary, urinary, and generative organs. It is also met with, though not so frequently, on the surfaces of serous membranes. But in fact there is no tissue or organ, not even bone, exempt from the formation of tubercle. The external configuration or form of tuberculous matter, according to the same author, is purely *accidental*, depending upon the form of the part, in which it is as it were moulded into the shape it assumes. As to its consistence and colour, he compares it to a mixture of soft cheese and water, but in another part states, "that tubercles often present the form of detached tubes or globular membranes, rolled up and mixed with tuberculous matter, like layers of boiled albumen or dead hydatids;" a circumstance which, he adds, "has been taken advantage of to support the theory of the hydatic origin of tubercle." Dr. Clarke's description of tubercle is borrowed altogether from that of Dr. Carswell.

This last author, as well as Andral, differ from Laennec in the opinion that it is always at first deposited in the form of grey semi-transparent bodies, which afterwards become yellow or opaque. They assert that it as often presents the latter appearance when first deposited. He also differs from Laennec in the statement that the softening process always commences in the centre of each tubercle. With respect to the locality of tuberculous bodies, the lungs, and particularly at their upper and back part, is their most favoured resort. This is so much the case, that M. Louis lays it down as a rule that tubercles are always found in the lungs when they exist in any other organ of the body. Next to the lungs, tuberculous formations are found most commonly on the surface of the small intestines; then, in succession, the liver, spleen, organs of reproduction, brain, and cerebellum may be esteemed most liable to them. It is rare, however, to find the tuberculous matter confined to one organ in the same individual; it is generally present in two or three organs, as the lungs, intestines, and bronchial or mesenteric glands.

Those who consider tubercle as organizable, have esteemed the process of softening as a consequence of the death of this substance; and Laennec states that it always commences at the centre, and proceeds towards the circumference. This is denied by Dr. Carswell. But in our researches to ascertain the true nature of tubercle, I do not consider it of much consequence whether the softening process begins in the centre or at the circumference. From my own observation, I should be inclined to consider it as, in general, commencing in the centre; for on examination of those who have died of tubercular phthisis, I have constantly found cysts of cartilaginous hardness containing the softened tuberculous matter. These cells often contain a "substance of a soft, chalky, or cretaceous character,"* and sometimes there remains only a nucleus of cretaceous or osseous matter, which states may be considered the last transmutation which the tubercle is capable of undergoing. As to their chemical composition, they consist of albumen, gelatin, fibrine, muriate of soda, phosphate of lime, and carbonate of lime. It is now universally acknowledged by practitioners, that although tubercles are the frequent cause of inflammation, yet this process has nothing to do with their formation.

Doctor Jenner and Doctor Baron threw considerable light upon their remote cause, for by feeding rabbits on unhealthy aliment, depriving them at the same time of exercise, and confining them in cold, dark, damp places, they induced the growth of tubercles, which, as Doctor Baron asserts, had at their

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* Forbes's Laennec, 254.

† Encyc. of Medicine, vol. iv. p. 253.

* Encyc. of Medicine, vol. iv. p. 266, and Pl. iv. Fig. 1 of Carswell's Delineations of Organic Diseases.

first appearance the hydatid or vesicular character, but *that* in their transmutations they became solid tubercles.

Last September I repeated the experiment by confining three rabbits in a small, damp place, and gave them no other food than common garden garbage; in about two months they died. On opening them no hydatids were found, but both liver and lungs were studded with diminutive white tubercles about the size of small shot, and which had an appearance of medullary matter or hardened curd. Doctor Collin Arrott, of Philadelphia, happened to call on me the 4th of last November, whilst examining one of these rabbits, and witnessed the appearances detailed. They exactly resembled those delineated by Carswell in the substance of the liver of the rabbit, in Plate II. Fig. 6, of his Illustrations of Tubercle.

This experiment, when coupled with those of Doctors Jenner and Baron, prove that diet of a quality unfitted for due nourishment, when conjoined with a damp, vitiated atmosphere, and privation of exercise, are capable of producing in an animal either hydatids or tubercles; and I should therefore infer from this circumstance, as well as from *post mortem* observations on human subjects, that the same causes are capable of producing *either the one or the other*, and that we are not called upon to conclude with Doctor Baron, for whose opinions, however, I feel the greatest deference, that tubercles are nothing more than hydatids that have undergone transmutation, or, in other words, that the first appearance of tubercle is always vesicular or hydatid.

The prevailing and most general doctrine respecting tubercles is, that they are caused by that undefined, multiform, or Protean state of the constitution termed scrofulous, which I cannot but look upon as a most convenient term, calculated to cloak our ignorance whenever we meet with chronic sub-inflamed tumours or ulcers to which we cannot apply any more definite appellation. Thus, for instance, we apply indifferently the same name to the chronic enlargement of the cervical glands which occur in children born either of healthy or unhealthy parents, or who may themselves either evince every appearance of robust health, or that want of it which is indicated by a wan, bloated countenance, deranged digestion, and tumid abdomen. We call also those chronic enlargements of the same glands scrofulous, which arise immediately after the eruptions of measles, scarlatina, smallpox, or the papular eruption of venereal complaints; and we endeavour to satisfy ourselves that in such cases scrofula must have been lying latent in the constitution, and was only *then* brought into action by the debilitating effects of the exanthemata mentioned, although the subjects of this supposed scrofula might have previously enjoyed the most perfect state of health.

If a patient has a foul ulceration of the throat or of the nares, with or without exfoliation of the bones, and if we cannot, in consequence of the infancy of the patient or other objection, call it venereal, we instantly make use of this most convenient cognomen, always at hand for service, and without hesitation christen the disease scrofula.

It is chiefly owing to this indiscriminate classification of local complaints under one denomination, which bear some similarity to each other, but arise from most dissimilar causes or morbid states of the constitution, that has induced many to question the claim of the *ars medica* to the rank of a science. But it must be acknowledged, that the present generation have taken the right path to remove this stigma from medicine, by endeavouring to place its doctrines on the solid foundation of morbid anatomy, and a more accurate nomenclature.

These observations, which may be considered trite and unnecessary, I am forced to make when I find the acute and laborious industry of Doctor Carswell and others has only led them to the conclusion, that tubercles in the lungs and elsewhere, are depositions of unhealthy, coagulable lymph incapable of becoming organized, and similar in every respect to that found in scrofulous enlargements of the cervical or mesenteric glands. Such, in a few words, as we shall see by and by, are, I believe, also the opinions of Doctors Clarke and Todd, and is the general doctrine of the day concerning tuberculous diseases.

As an illustration that such is the governing opinion, we find Doctor Carswell insisting upon the curability of tuberculous disease of the lungs, because we so frequently witness the disappearance of scrofulous swellings near the surface of the body. His words are,

" when, therefore, enlarged glands in a scrofulous patient ultimately disappear, we almost with certainty conclude that we have witnessed the cure of a tuberculous disease. Tabes mesenterica, which consists in a similar diseased state of the mesenteric glands, has also been known to terminate favourably." *

This observation sufficiently proves, that in Dr. Carswell's mind scrofulous swellings of the glands and tubercles of the lungs are identically the same disease.

Doctor Clarke's entire work on scrofula and consumption is grounded on the supposition of this identity, for in a note at page 11 we find the following passage:—" The terms *scrofulous* and *strumous*, when strictly applied, have the same import as tuberculous," and are used in this sense throughout his work. And in another place he observes, " whatever may be the site, consistence, or form of tuberculous matter, it is to be regarded as a morbid inorganizable product, and consequently unsusceptible of any change that is not effected by the living tissue in which it is deposited."†

Doctor Todd also in his article on strumous dyspepsia,‡ observes, " that the ordinary termination of the disease is the formation of that morbid growth or deposit well known under the name of *tubercle*, which is most usually seated in the lymphatic glands, has almost exclusively received the name of scrofula." In what manner the strumous state of constitution produces tubercles, we are referred to his account of it in Doctor Clarke's work on climate.

This explanation is too long to read; it will suffice here to say that Doctor Todd considers tubercles to be depositions from the arteries, which, instead of secreting healthy, coagulable lymph, capable of becoming an organized tissue, deposit, in consequence of the morbid condition of the system, a matter or lymph, " which, from deficient vitality or some other condition, is below the standard of organization, and in this state the nutritive molecules, instead of tissue, may be converted into tubercles."§ I have here given sufficient authorities to show the prevailing doctrines of the present time respecting the identity of tubercle and scrofula.

Now, Mr. President, those who theorize ought at least to take good and especial care that all the parts of their hypothesis may harmonize, and that one part may not be in direct contradiction to another. In the quotations I have given from these three influential authorities, the identity of scrofulous tumours near the surface of the body, and tubercles of the lungs and other deep-seated parts, is insisted upon. We also find in every part of their writings on the subject another assumption equally urged, (justly, I allow), viz.: that inflammation has nothing to do with the production of tubercles, and that when inflammation does occur, it is a consequence, not a cause, of tuberculous deposits. How will Dr. Carswell reconcile the two following passages:* at page 267 we read as follows —" under such circumstances it would be absurd to ascribe the origin of tuberculous matter to inflammation." And after arguing the identity of scrofula and tuberculous diseases, we find, at page 259, the following observations:—" inflammation of any organ may be followed by the deposition of tuberculous matter in that organ in the manner in which we have already explained. We have frequent examples of the sub-cutaneous glands of the neck and sub-maxillary glands becoming tuberculous, after an acute attack of inflammation, although previously they were neither enlarged, indurated, nor otherwise diseased."

If an hypothesis be true, it will be found capable of accounting for all the phenomena of a disease. Now here is a stumbling block which I leave to the advocates of the identity of scrofulous and tuberculous diseases to get over; for it must be admitted that scrofulous swelling of the sub-maxillary, cervical, or other glands, is at their commencement, in ninety-nine cases out of a hundred, attended with inrcease of heat, and more or less tenderness upon pressure on the part, symptoms which obviously indicate inflammation, although in a minor degree to that which occurs in common phlegmon; and yet inflammation, it is admitted, is not ne-

* Encyc. of Medicine, vol. iv. p. 265.
† Clarke, p. 122.
‡ Encyc. vol. ii. p. 155.
§ Encyc. p. 655.

* Encyc. vol. iv.

cessary for the production of tubercles of the lungs, although it is argued that the two diseases are identical.

One proof that there is no identity between scrofula and tubercles is, that the most minute injection cannot be made to penetrate the latter, but no one will be so hardy as to say that a scrofulous gland of the neck or groin cannot be injected; and this fact is in itself sufficient to prove that the two diseases are totally dissimilar, and that there is no identity between them. If tubercles, then, are not preceded or caused by inflammation, as is allowed by those whose doctrines I oppose, I should be glad to inquire what is the cause of those depositions of coagulable lymph of which they are *thus* supposed to be formed. Lymph is not deposited by vessels in their ordinary quiescent state, but by the vessels of parts in which inflammation exists; and although Dr. Todd supposes this lymph to be, from the morbid state of the system, unfit, like healthy lymph, to become organized, it may be asked, why he supposes that lymph, healthy or unhealthy, should be deposited at all, without its usual precursor or concomitant inflammation.

Again, how does this theory explain the formation of those regular, insulated, miliary or granular semi-transparent or opaque tubercles with which we see the surface of the pleura pulmonalis and peritoneum dotted. When coagulable lymph is deposited, it is always in an unshapen, irregular mass, moulded by the form of the parts into which it is poured out. But tubercles, until they spread into each other, in general shew individual shape, form, and regularity.*

It may also be justly urged against this theory, of the inorganic lifeless state of tubercles, that it is contrary to all we know of the nature of animal life, that such masses could remain in living tissues without exciting them to those actions (inflammation and suppuration) calculated to cause their expulsion. Now it is well known that tuberculous masses may remain for years without exciting any action in the parts in which they are imbedded; and so much is this the case, that tubercles in the lungs and other organs are often found after death in those who gave no indications of their presence during life.

It may possibly be urged that extraneous bodies, as for instance leaden bullets, may remain in the body for years without exciting those actions which would cause their expulsion. To this I reply, that all such bodies as are allowed thus to lie quiescent in living tissues are found to be surrounded by a cartilaginous formation, which, it seems, the living tissues in which they are imbedded produce, in order, as it were, to insulate them from the system. Now, except it were found that tubercles were surrounded by a similar barrier, analogy is strongly against the doctrine that they are insensible lifeless masses.

Although the above considerations induce me to reject the doctrine that tubercles, such as they were first accurately described by Stark, and afterwards by Bayle, Laennec, and many modern pathologists, are identical with glandular scrofulous tumours, yet I do not deny that the scrofulous constitution is the most prone to tuberculous consumption.

I have constantly observed that those persons who suffered from scrofula in infancy and youth, are the most liable in mature and advanced age to cancerous complaints; but surely this circumstance does not prove the identity of scrofula and cancer.

In 1810 I published a small essay, in which I undertook to prove the connexion which existed between indigestion and scrofula; and showed that either the want of powers to assimilate our food, or that aliment unfit to replenish the waste of the body and to supply its wants (the one the most common disease of the rich, the other of the poor) were the most usual causes of scrofula. I considered hereditary weakness, transmitted from debilitated, old, or diseased parents, as a frequent cause of scrofula, particularly amongst the upper classes; and I afterwards considered want of due exercise, cold moist air, improper diet of an ascescent tendency, deficient clothing, and the exanthematous fevers as equally exciting causes of the same disease.

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* On reading this passage some fine preparations of pulmonary tubercles were shown to the section, which exhibited the appearance of small, *white*, round, compact bodies into which no injection had penetrated, although the surrounding tissues were perfectly redwih it.

At the time this essay was published, scrofula was universally considered to be a disease arising from an hereditary taint or acrimony in the blood; and the derangement of the digestive organs, with the other causes just enumerated, were totally overlooked as the remote or immediate causes of the disease. The only treatment in use before this publication was sea bathing and a farrago of specifics, thought to be capable of obviating the supposed acrimony or virus to which it was attributed. It is, however, gratifying to me to find that principles, which I was the first to promulgate, are now firmly established; and that, amongst others, even Doctor Clarke has considered the exciting causes of the disease under precisely the same heads which I have given in the small work now on the table before you.

These headings are to be found in his work on Pulmonary Diseases and Scrofula, in the section which treats of the "Causes of Tuberculous Cachexia in Individuals not hereditarily predisposed to Pulmonary Consumption," and are, 1st, improper diet; 2nd, impure air; 3rd, deficient exercise; 4th, imperfect clothing and inattention to cleanliness. Now all these are the precise headings of sections in the work before you, and considered by Doctor Clarke as exciting causes of tuberculous cachexia, or, in common language, scrofula. Even he considers the exanthemata as exciting causes of the disease, but not under a distinct heading as I have done. He doubts, however, that syphilis, which in my opinion possesses all the characters of the exanthemata, is an exciting cause. But that the papular venereal eruption, or syphilitic lichen, as it is called, produces obstinate swellings of the lymphatic glands of the neck, I have witnessed in many thousand instances.

It would certainly have been more gratifying to me had Doctor Clarke honoured me by noticing this work; but as it was so small a one probably it escaped his observation, and that his sagacity led him, in 1835, to consider this subject, in all its minutiæ under the same views which I happened to entertain in 1810.

Doctor Todd has given an excellent article in the Encyclopædia of Medicine on Strumous Dyspepsia, in which he has *enlarged* upon the precise principles laid down in this same work; and in treating of the deranged functions of the biliary system, he points out, as I had done before him, in what manner all the consequences may follow which produce scrofula. Neither has *he* condescended to notice my priority of claim to these views and principles, which were esteemed, by the orthodox, at the time of the publication of this work, novel and dangerous heresies against long established doctrines.

If tubercles then are not depositions of unhealthy lymph, capable of becoming organized by an extension of the vessels of the tissues in which they are placed, what are they? In one word, it is my opinion that they are beings possessing a vitality independent of the animal in which they are lodged, except so far as that animal affords them; 1st, the organic particles of which they are formed, and, 2dly, the nutriment which they imbibe by their own innate powers; and thus, that they form the last link in the chain of the last class of animals, the entozoa. The shock which the mind must receive on first hearing the proposition, that an apparently disorganized mass of animal matter shall enjoy the possession of an independent vitality and state of separate existence, will be considerably lessened by a consideration of the gradual steps by which animal and vegetable life is found to descend, so that at length we have no other mode of distinguishing between dead and living matter, except by a power in the latter of resisting the influence of those external agents, which cause dead animal and vegetable matter to run into fermentable changes.

It was under these views that John Hunter submitted eggs to a freezing temperature destructive of life, and demonstrated by these well-known experiments, that in their ordinary state they have a power of self-preservation, and are not obedient to the same laws which affect dead animal matter; and thus he proved that an egg possess independent vitality. Hunter goes still farther than I have ventured, in ascribing the principle of life to an apparently disorganized mass of animal matter. He infers that blood possesses life, from its power of coagulation, and adds, in illustration of his argument, that if an animal is deprived of life by lightning, or is hunted to death, its blood loses

the property of coagulation, and is always found in a state of fluidity.

When we consider the gradual and imperceptible steps in the scale of animal life, and the low degree to which they descend, particularly in the entozoa, or those parasites with which animals are infested, it will not then be found so very startling a proposition to attribute an independent existence to these masses of matter termed tuberculous, which have no connexion by vessels with the parts in which they are imbedded, and yet preserve themselves from those changes to which all dead or inanimate animal matter immediately enters when subjected to moisture and a temperature above the freezing point.

(To be continued.)

ANIMAL MAGNETISM.

Lecture delivered in Edinburgh on 13th February, 1837.

(Continued from p. 928.)

Mr. Colquhoun stated, that he was now about to direct the attention of his audience to the general conclusions that may be legitimately deduced from the information already laid before them, to the various theories which have been propounded, with a view to account for the facts, to the tendency of the doctrine itself, and its bearings upon physiology, psychology, and general philosophy.

In the first place, then, we are to consider Animal Magnetism as a powerful agent in medicine, by the application of which, according to the reports of those professional gentlemen most intimately conversant with the subject, not merely trifling ailments, but many serious, complicated, and inveterate diseases have been cured, after having previously baffled all the best efforts of medical skill. Indeed, Animal Magnetism has hitherto been principally resorted to in such desperate cases where all ordinary means had failed, and it has been employed even by persons otherwise sceptical as to the efficacy of the treatment; according to the maxim of physicians, "*satius est anceps quam nullum experiri remedium*"—is better to employ a doubtful remedy than no remedy at all. In such cases, the employment of this method has been generally attended with beneficial results, and it has seldom, if ever, been found to prove injurious. As a medical agent, its operation seems to be twofold.—1. Its processes are in themselves stimulating, tranquillizing, corroborant, and restorative, and frequently cure or alleviate the morbid affections of the patient, without producing any other remarkable phenomenon; and, 2. These processes sometimes place the patient in a state of somnambulism, or *somno-vigil,* in which there is occasionally developed, in a very extraordinary degree, that *sanative instinct,* which enables him to discover the causes of the morbid symptoms, and also the most effectual means of alleviating them. In short, to become his own doctor, or, at least, to point out to his physician the most appropriate treatment. This development of the sanative instinct, which is common to the natural and the magnetic somnambulism, might be illustrated by numerous examples, did my limits permit me to enter into detail. Referring you, however, to *Isis Revelata* for many curious facts and observations, I shall merely quote the opinion, founded upon much personal experience of the subject, deliberately given by the celebrated Dr. Georget. "I believe," says that eminent physiologist, "that no perfect medicine can exist but that of the somnambulists, in all that relates to their own complaints; and that we may advantageously avail ourselves of their admirable instinct in the case of other patients."

But besides these purely medical effects of the treatment, I have shewn you that it occasionally produces various physiological phenomena of a more or less remarkable character. It is difficult to ascertain the causes which are principally operative in the production of these extraordinary phenomena; but I shall now proceed to give you an exposition of some of those theories, upon which very eminent physiologists have attempted to explain the facts.

Mr. C. again adverted to the old theory propounded by the first French Commissioners—that of imagination, imitation, and *attouchement*—which, when compared with the facts, has now become so utterly ludicrous, that even the honest and intelligent sceptics and opponents of the system have long been ashamed of it, and repudiated it. Another theory, founded upon more accurate and more rational physiological views, has now been almost universally adopted by those philosophers who have recently investigated the subject. It seems to be now the general opinion of all the most emi-

nent physiologists, that it is through the medium of the nervous system that the vital principle is acted upon—that the nerves constitute the source of the animal affectability—the connecting link between mind and matter. Accordingly, many learned physicians have found themselves compelled to assume the fact of the permeability of the nerves, and also the existence of a peculiar nervous fluid, without any actual or rigorous demonstration of their reality. Indeed, this supposition of a nervous secretion and circulation, with its utmost difficulties, seems much more rational and satisfactory than any other hypothesis with regard to their nature and action. It has been maintained, upon speculative grounds, by the ablest physiologists; and it enables us to account for various phenomena which appear to be otherwise inexplicable. The opinion, I believe, is now almost universally held, upon probable experimental evidence, by the most eminent men of science in France and Germany, where it is considered as having been nearly rendered demonstratively certain by the interesting researches of Bichat, Reil, Autenrieth, Humboldt, Burdach, Beclard, and others, who have gone far towards the actual demonstration of the fact of the secretion and circulation of a nervous fluid, and even rendered it extremely probable that this circulating fluid is capable of an external expansion, which takes place with such energy as to form an atmosphere, or sphere of activity, similar to that of electrical bodies. This hypothesis has acquired additional corroboration, and been almost raised to the rank of a *vera causa*, by the later researches of the celebrated French anatomist and physiologist, Beclard. That skilful experimentalist, having cut a nerve of considerable size, adjoining a muscle, which induced paralysis in this part, perceived the contractile action re-appear when he approached the ends of the divided nerve at the distance of three lines, from which it would appear to be pretty evident that an imponderable substance, that is to say, a fluid of some kind or other, traversed the interval of separation, in order to restore the muscular action. Another experiment of the same philosopher not only proves the existence of this fluid, but seems also to demonstrate its striking analogy to electricity. Having frequently placed a magnetic needle in connexion with the extremity of a divided nerve, he constantly perceived the deviation of the pole of the needle, caused by the reciprocal attraction of the two opposite fluids. To this may be added the experiments which have been made with regard to the action of galvanism upon dead men and other animals. Dr. Ure found that the galvanic energy is capable of supplying the place of the nervous influence, so that, while under it, the stomach, otherwise inactive, digests food as usual. Other experiments are mentioned in *Isis Revelata*, which prove the remarkable analogy that exists between galvanic electricity and nervous influence.

Admitting, then, the existence of this nervous fluid, its analogy to the other known, active, and imponderable substances, and its capability of external expansion, as in the case of electricity; we may easily conceive it also capable of being transmitted, either involuntarily, or by the volition of one individual, with such energy as to produce certain real and perceptible effects upon the organism of another, as is known to occur in the case of the electrical animals. Indeed, the fact of the actual transference of nervous or vital power, in certain circumstances, from one individual to another, is now admitted by some eminent medical writers; amongst others by the learned Dr. Copland, who, in his *Dictionary of Practical Medicine*, observes, that this fact has been long remarked, but that it has been most unaccountably overlooked in medicine.

But although the theory now expounded, if otherwise deemed admissible, might be held sufficient to account for many of the more ordinary effects of the agent called Animal Magnetism; and, especially for the sanative efficacy of the processes, there is a variety of other magnetic phenomena—and these by much the most extraordinary—of which it does not immediately appear capable of affording any satisfactory explanation; I allude to the remarkable phenomena of the magnetic somnambulism. We may, however, venture to prosecute our speculations a little farther, and endeavour to ascertain, whether this theory of a nervous fluid, admitting its existence, may not be legitimately extended, so as to afford some explanation even of these extraordinary and apparently refractory phenomena.

After stating that the existence of a nervous or vital fluid lies at the bottom of almost all the theories of Animal Magnetism, since the days of Mesmer, Mr. C. proceeded to give an exposition

of the opinions upon this subject of M. Tardy de Montravel, M. Deleuze, Dr. Leonard, &c. and noticed the distinctive difference between the cerebral and ganglionic systems of nervous energy. This difference appears to have been long ago remarked by Paracelsus and Van Helmont; and it has been minutely investigated in more recent times, by the most celebrated French and German physiologists.

Mr. C. observed that the theories already noticed had been propounded by men eminent for their learning, their talents, for observation, and their spirit of research, and that, therefore, they were well worthy of being deliberately considered. After a great deal of reflection upon the subject, continued the lecturer, a still more simple explanation of the phenomena in question has occurred to myself, which, with great hesitation, I venture to obtrude upon your notice. I have found, in the course of my researches, that the whole of the extraordinary phenomena of Somnambulism, or Ecstasis, have been produced by strong mental or moral impressions, as well as by the magnetic processes. Now, I would, in the first place, beg leave to refer to what I have said, upon former occasions, relative to the functions of the nervous economy. The nervous system, indeed, I am disposed to consider, along with many eminent physiologists, as the great mediator, or medium of communication, between our physical and moral nature—as the grand connecting link between mind and body. From this view it would appear to follow naturally, that the nerves must be capable of being affected in two different, and, indeed, opposite ways—either physically, or by a combination of physical and moral causes, as in the case of the magnetic manipulations already described, or morally, as in the case of that high exaltation of the mind, which is manifested in the devotional ecstasis. It is remarkable that the effects produced in both cases are perfectly analogous to each other—the organic changes are precisely the same, the phenomena are exactly similar; consisting, in what I would take the liberty of calling—although the propriety of the expression may, perhaps, be doubted—a *polarization* of the organism—an annihilation, or at least, a temporary suspension, in a greater or less degree, of the corporeal sensibility, and a wonderfully augmented developement of the spiritual faculties—the intellectual as well as the instinctive. This view is sufficiently simple and consistent with the phenomena. I might illustrate it at great length, did my limits permit; but I have already occupied so much of your time, and, indeed, I have already laid the facts upon which it is founded so fully before the public, that I shall content myself, for the present, with the concise statement of it now given. I shall only add that this theory would also account for the phenomenon of what is called the *natural* or *spontaneous* somnambulism; because we might easily conceive a peculiar idiosyncrasy, or constitutional predisposition of the nervous system in certain individuals, or some morbid action which rendered them more liable to fall into that pathological state of the organism.

Mr. C. then stated that he had not the presumption to submit the foregoing theoretical views, either as altogether just and satisfactory in themselves, or as sufficient to account for the whole of the phenomena, of which he wished it were in his power to present a more luminous and a more adequate explanation. He said that he would most willingly abandon all attempts to elucidate the medical and physiological part of his subject to those gentlemen, whose professional education, and habitual pursuits, ought to render them far better qualified for the task; and in recommending this interesting subject to their serious attention, he would humbly beg leave to suggest, that they ought not to confine themselves to an inquiry into the merely physical properties and functions of the nervous system, but that they should extend their investigations to the effects of moral influences in modifying that system, otherwise they can never hope to succeed in giving a satisfactory explanation of the phenomena of animated and intelligent nature.

But, however important to medicine and physiology, Animal Magnetism is no less interesting when considered in its relations to general philosophy. For, whatever speculative notions we may be pleased to entertain upon this abstruse but fascinating subject, the facts elicited by the magnetic practice—of which the reality has now been demonstrated by the most ample, the most cogent and incontrovertible evidence—the facts, I say, still remain to us, although we should never become capable of ascertaining their causes. And can it be doubted that the insubvertible establishment of these

remarkable facts, so long the subject of denial, of scepticism, and of ridicule, is, in itself, a real and most important acquisition to science?

Those learned and intelligent men who have most profoundly studied this interesting branch of science, and whose opinions, therefore, are the most valuable and the best entitled to credit—those eminent professional gentlemen will tell you, that this doctrine involves the discovery of new principles in physiology and therapeutics—that it has developed agencies and susceptibilities in the human constitution hitherto unknown or disregarded—that it has already opened up many new and highly important views of the physical and moral nature of man, their connection and reciprocal action upon each other — that it has given us a clearer insight into the motions and operations of the immaterial principle which animates and actuates the material organism, and that it promises still farther to increase our knowledge in this abstruse and intricate department of study. Such are the opinions of the importance of Animal Magnetism expressed, not by mystics and enthusiasts, but by learned, intelligent, sober, and practical men; and, if they be right, as I am convinced that all who are conversant with the subject must allow them to be, can this study be said to be one of mere curiosity, and destitute of all interest for science and for humanity?

There was a time—I trust the period is now past even in this country—when but to mention the name of Animal Magnetism—*a fortiori*, to hint a belief of its reality as a natural agent—was sufficient to excite the most unbounded ridicule even among men otherwise accounted learned and enlightened. Such is the withering and mischievous influence of prejudice? But how stands the case now? Let us listen to the deliberate opinions of M. Andral, a professional gentleman of great eminence, and who, I should think, will scarcely be accused of entertaining any violent prepossession in favour of the doctrine in question, his leaning, indeed, being entirely to the other side. Now, does this eminent medical authority ridicule, does he even deny the reality of the magnetic action? Far from it. Of the strictly medical efficacy of the treatment, indeed, he appears to have little or no practical knowledge; but upon other effects of the processes, his opinions are clearly and decidedly expressed. He explicitly admits, as I have shewn more at large in *Isis Revelata*, that the state of ecstasy or somnambulism may either occur spontaneously, *or it may be produced in one individual in consequence of an influence exercised on him by another*; and he acknowledges that, in default of any other adequate mode of explaining the fact, we *must* admit the existence of a *force*, a *power*, which has been called *magnetic*. The name, he justly observes, is of no consequence whatever. Here, then, is a very remarkable pathological state of the organism, which is acknowledged by all competent observers to be occasionally produced by the magnetic processes. And will it be asserted that this naked fact is, of itself, of no physiological importance? And can the physicians hesitate to investigate the interesting phenomena of the pathological state in question, without abandoning a most useful department of professional study, for which the discoveries of Animal Magnetism afford them many facilities? Pathology has been said to be the crucible of Physiology; and no examination of dead structure can supersede the necessity of investigating the principles of life and action in animated beings.

In considering the phenomena of Animal Magnetism. M. Andral also admits, in the magnetic somnambulism, the facts of the abolition of all sensibility by the ordinary organs of perception, and the obliteration from the memory, when awake, of all circumstances that may have occurred during the paroxysm. M. A., it is true, while he distinctly admits the magnetic agency, has expressed his scepticism with regard to some of the other extraordinary phenomena. But if he had taken the trouble of examining the whole of the evidence, he would assuredly have found that these phenomena, of which he is sceptical, have been established by testimony equally strong and unimpeachable, with that which is applicable to the facts he admits. In the discussions which took place in the Royal Academy of Medicine at Paris, previous to the appointment of the last committee, of which an able and interesting account has been published by M. Foissac, there was scarcely one individual among the opponents of a new investigation, who attempted to deny the reality of the magnetic action; and the committee subsequently appointed, after a long, and careful, and

impartial investigation, fully recognised the existence of many of the most interesting phenomena of the artificial somnambulism; thus confirming the narratives of preceding observers. Several hundreds of medical inquirers of the highest professional eminence, in various parts of Europe, have attested the reality of the whole of the magnetic phenomena.

Admitting, then, as we are compelled by the evidence to admit, the existence of these extraordinary facts, it remains for us to consider their bearing upon general philosophy. Now, it does appear to me, that, independently of their medical and physiological value, these facts are of the very highest importance to metaphysical science, inasmuch, as they afford a clear and incontestible demonstration of the immateriality, independence and indestructibility of the spiritual nature in man, of the human soul. A controversy, it is well known, has been maintained from the most remote times, relative to the constitution of man,—whether he is altogether a material and organic being—a mere passive machine; or whether he possesses an active, intelligent, spiritual principle, independent of the corporeal organism. Those who advocated the former opinion have been called *Materialists;* those who maintained the latter, *Immaterialists,* or *Spiritualists.* The controversy has been carried on with great ingenuity on both sides, principally by making a liberal use of abstract metaphysical arguments. Of the two antagonist parties, however, as it appears to me, the Materialists have always made the most lavish employment of speculation and hypothesis, as may be seen, indeed, in the writings of the greater number of the French philosophers for some time previous to the revolution, whose opinions have been attempted to be revived, popularised and perpetuated, by certain recent reasoners in this country. But on the side of the Spiritualists, there are some physical facts and analogies combined with certain phenomena of consciousness which never could be effectually obviated by the utmost efforts of vain speculation or ingenious sophistry. Of these, I shall only refer to one remarkable instance, from which Lord Brougham, in his recent *Discourse on Natural Theology,* has drawn his strongest philosophical argument in favour of the independence of our spiritual nature. It is a well known fact, that the matter of which our bodies are composed, is subject to continual change; so that, after the elapse of a certain number of years, probably no particle of the matter, of which they were originally constituted, remains. This observation applies to the substance of the brain, as well as to all the other parts of the body. Notwithstanding this total corporeal change, however, the mind still continues the same—the individual is conscious of his own identity—he possesses an internal feeling that he is still the same person he was previous to the change. This argument, founded upon a physical fact combined with a phenomenon of consciousness, is unquestionably strong, and not easily refuted. A similar conclusion, too, may be drawn from the fact, that the energy and activity of the mind frequently increase while the corporeal powers decay; nay, it has been observed by eminent physicians, that sometimes, even upon the approach of death, when the physical energies are completely exhausted, the spiritual faculties become wonderfully exalted, and manifest something of a prophetic power.

But, if we admit the reality of the phenomena of somnambulism, this *questio vexata,* this apparently interminable controversy may now be considered as completely set at rest. The physiological materialist, at least—the advocate of the organic origin and nature of the mind or spiritual principle—will probably find no little difficulty in attempting to give a satisfactory answer to the argument directly drawn from the magnetic facts. We have seen that, both in the natural and in the artificial somnambulism, not one, or two, or three, but the whole of the corporeal organs are occasionally dormant and insensible to any, even the most painful external impression; yet the individual, while in this state, sees, hears, speaks, reads, writes, thinks—his intellectual faculties manifest more than their usual acuteness and energy, and he performs many delicate and difficult operations, of which he is found to be totally incapable when awake. To this I may add the very remarkable circumstance, that he recollects nothing of what occurred, after being restored to his natural state. Do not these facts warrant us in concluding with the ancient dramatic poet, that it is the "mind which sees, and the mind which hears, and that every thing else is deaf and blind?" I have no hesita-

tion in maintaining that, in these facts, we have a most direct, distinct, cogent, and impressive proof of the independent existence of the soul of man; and, consequently, the strongest philosophical grounds for presuming its immortality; since it has now been demonstrated beyond the possibility of rational doubt, that, in its manifestations, it is not necessarily chained down to any particular part of the sensible and mortal body; but that it is capable of exercising its various functions, in peculiar circumstances, without the assistance or co-operation of any of those material organs, by means of which it usually maintains a correspondence with the external world. We see that, in the circumstances alluded to, the mind does not participate in those changes which affect the corporeal organism; but that, on the contrary, while itself, always continues one and the same, it appears to acquire a greater developement of its faculties, in proportion as it becomes emancipated from the shackles of matter. I may add, that even the assumption, warranted as it seems to be by the result of experiment and observation, that, something of attenuated, invisible, and imponderable materiality, analogous to electricity, exists in the living body even this assumption does in no degree affect the important doctrine of the immateriality and indestructibility of the soul itself. This nervous, vital, or magnetic energy, supposing it an actual fluid, is considered as merely the vehicle or medium through which mind acts upon matter, and *vice versa;* and this theory of the connection between our physical and moral nature, and of their reciprocal action and reaction upon each other, seems, as I have elsewhere observed, far more analogically consistent with that beautiful regularity, that harmonious and almost imperceptible gradation, which are so admirably manifested in all the works of Divine Power and Wisdom, than to conceive the immaterial soul to be immediately united to that heterogeneous being, the gross and perishable body, which is every moment liable to decay and corruption, unless vivified and sustained by the spiritual principle which animates and preserves it.

Such is the legitimate tendency of the facts of Animal Magnetism, and of the conclusions rightly deduced from them. The doctrines, therefore, which that science teaches, are calculated to elevate us above the grovelling and degrading hypothesis of philosophical materialism, by demonstrating to all that man is not a mere machine, endowed with certain corporeal organs, which "*secrete mind* as the liver secretes bile." (Such is the language of some of the *philosophers* to whom I allude, but which, I confess, far surpasses my feeble powers of comprehension.)—But that he possesses and manifests an independent, immaterial, and immortal spirit, breathed into him at his creation, as the indestructible portion of his being, by the Supreme and sole Author of all spiritual, as of all material existence.

In the preceding observations, I have designedly refrained from entering upon the theological, or even the moral argument for the immateriality and immortality of the soul; because, whatever overwhelming cogency these arguments might give to our conviction, they lie quite beyond my peculiar province upon the present occasion. I think, however, you cannot fail to have perceived that the doctrine of Animal Magnetism, flowing directly from an accurate observation of the phenomena of nature, affords the means of terminating an old and rather an inveterate quarrel, founded, as I believe many quarrels are, upon mutual misapprehension; that it tends to reconcile philosophy with religion, by demonstrating that the legitimate deductions of science are consistent with the best regulated feelings of the heart, and in strict accordance with our highest and holiest aspirations.

I have now endeavoured to present you with an outline of the history of Animal Magnetism, a short description of the magnetic processes, a summary view of the phenomena developed, a succinct exposition of the various theories which have been propounded in order to account for the facts, and some notion of the scientific importance of this long neglected subject, as well as of the general tendency of the whole doctrine. My limits necessarily imposed upon me the strictest attention to brevity—many interesting topics I have been compelled to leave entirely untouched—and even those I have been enabled to bring under your notice, it has been impossible for me to discuss at a length proportionate to their importance. All, in short, that I could afford has been a very general view of the subject—the details must be left to the private investigation of those individuals who may feel disposed

to prosecute the inquiry. I have merely brought you to the portico of the temple of magnetic science, and shall now leave it entirely to yourselves to determine, whether the view you have obtained of the external fabric is sufficiently inviting to induce you to proceed into the interior of the edifice.

In approaching the termination of these lectures, however, I must take the liberty of addressing to all who now hear me a few words of serious advice. In this country, Animal Magnetism has hitherto been the fertile subject of much ridicule; the study of it has been viewed with prejudice, and the facts it professes to have developed have been treated with unbounded scepticism. But professional men of the highest eminence, after extensive practical experience, have borne ample testimony to the reality of the agency, and to the truth and importance of the facts. Like all other estimable things, however, it is admitted that Animal Magnetism is susceptible of great abuses in the hands of the ignorant, the unskilful, and the unprincipled; and it is universally acknowledged that the practice of it by the inexperienced may be exceedingly dangerous. In order to give some idea of this danger, Mr. C. referred to the narrative of Dr. Fillasier, which will be found in *Isis Revelata*, vol. ii. p. 129. On account of the danger attending the practice, therefore, individuals ought to be extremely cautious of undertaking any experiments of mere curiosity.

Like many other medicines, Animal Magnetism, when incautiously or improperly administered, may operate as a deadly poison. The practice, therefore, never ought to be attempted, excepting by the direction, and under the superintendence of a regularly qualified physician, who, in consequence of his professional education, his acquired knowledge and experience, is alone capable of managing and controlling an agent so powerful, and of rendering it effectually subservient to the interests of humanity.

REVIEW.

Practical Observations on the Venereal Disease and on the Use of Mercury. By Abraham Colles, M.D., one of the Surgeons to Dr. Stevens's Hospital and lately Professor of Surgery in the Royal College of Surgeons, Ireland, 8vo. pp. 351. London 1837. Sherwood & Co.

The Author of this work has been at the head of the profession in Ireland for more than a quarter of a century and, has enjoyed a justly-acquired fame, which will be seldom equalled by his successors. Besides a most extensive practice, Dr. Colles stood high as a professor, and was the instructor of thousands of his countrymen, as well as of those who, for years past, visited the Dublin Schools. His experience in the class of diseases of which he now treats has been most extensive, and he candidly places the results of his observations before the public. He does not profess to write a treatise on the Venereal Disease, but to give the result of his own observations, and was not bound to quote contemporary writers. Had he published his lectures on the subject, then he would have been bound to place the views of others before his readers. It certainly would have been deemed the highest gratification by some juniors in Dublin, had their names been mentioned in the work before us, but it is bad taste to show the world their chagrin for the omission. It is scarcely necessary to state, from what we have already mentioned, that the work before us is one of the best which has appeared since that of Hunter. It bears the strongest evidence of repeated and careful observation, and will be referred to by all future writers on the venereal disease.

The London Medical

AND

Surgical Journal.

Saturday, April 1, 1837.

THE NEW METROPOLITAN UNIVERSITY.

It could not have been reasonably expected, that an assemblage of individuals so incongruous—an assemblage composed of all ranks of society,—possessing opposite political opinions and different religious creeds, as the Fellows of the New Metropolitan University, could meet together and

all at once harmonize, and accord in constructing the frame-work, and arranging all the minute details of the new institution. The first object of their deliberation was the appointment of a REGISTRAR, and they empowered a small committee to determine and specify the duties, which would be required of such an officer. One portion of the FELLOWS conceived that the duties of the registrar were of the highest importance, and that on *his* qualifications, as a scholar, and his demeanour as a gentleman, the future interests and success of the new university would materially depend. Others of the fellows conceived, that a mere clerk or active man of business would be perfectly competent to discharge the necessary duties. The point, therefore, to be discussed and determined was, the amount of the registrars salary; and whilst Mr. Warburton was of opinion, that £500 per annum would be sufficient, others considered that a larger sum should be given, in order to secure what they considered a competent officer. On putting the question to the vote, Mr. Warburton's proposal was rejected by a majority of nearly two to one,—so that it is now understood, that a public advertisement will appear for candidates for the office, so that the intrigues and applications which have been already made by individuals, may be said to have completely failed.

We may, indeed, congratulate the public, that the *economical* recommendation of Mr. Warburton, to appoint a mere *clerk* for such an important office, will not be entertained. The pretensions of Mr. Coates, of the Gower-street, company, who is a candidate, will it is hoped, be considered too valuable in his present situation, to be dispensed with; and we would strongly advise Dr. Forbes, of Chichester, who has also offered services to stick to his arduous engagements in Paternoster-row, and content himself with the more *philosophical* recreations in compiling and translating useful works.

To all those who are interested in the well being of this great national institution, it must be gratifying to observe, that the first attempt at jobbing and intrigue is at once stifled; and it is, therefore, not anticipating too much to hope, that on all future occasions, whenever attempts are made by individuals to serve private purposes, there is a sufficient number of distinguished men belonging to this institution, who will check corruption in its bud, and legislate for the public weal.

PARLIAMENTARY INTELLIGENCE.

ON Tuesday last, Mr. Tooke, "seeing the Honourable Member for Bridport in his place," wished to ask him, as he is the only *Fellow* of the New London University in the House, whether they had yet opened their Charter—where they proposed to hold their meetings, and how soon—and whether they had fixed upon any course for enabling Students to take out a College Degree?"

Mr. Warburton said, "The London University had opened its Charter—the Government had given the Rooms in Somerset House lately occupied by the Royal Academy,—and they had appointed a Committee to consider all Regulations connected with the taking out of Degrees."

THE JOINT-STOCK COMPANY IN GOWER-STREET.

SEVERAL Students were induced to enter to the Medical Classes of Univer-

sity College at the commencement of this session, in consequence of being informed, that in a short-time the Joint-Stock Company would be empowered to grant degrees.

An apparent similarity of names gave rise to the mistake, which was readily grasped at by certain individuals, and held forth as an inducement to Students entering to the Gower-street Medical Lectures. The names, London University, and London University College—are easily confounded,—the first is that of the New Metropolitan University, which is the only Institution in the Metropolis which is empowered to grant Medical degrees,—the second is that of a Joint-Stock Company, formerly called the London University, which surreptitious name, they were very properly deprived of, and got the title of University College when the National Establishment was instituted, bnt has no power whatever, as we have already stated, to grant degrees.

To prevent any mistakes from mere names in future, whenever we speak of the University of London, we mean the New Metropolitan University; and we shall always designate *University College* by its appropriate appellation—the Joint-Stock Company of Gower-Street.

In adverting to the manœuvres which public bodies are often induced to employ for the furtherance of worldly purposes, we may also allude to a disreputable, and what was soon found out to be a shallow device to attract Students, and induce them to enter to the Lectures of the School of the Joint-Stock Company, was resorted to at the commencement of this session. No less than three dead bodies were publicly exhibited as a *Spectacle*, during all that period in which Students were hesitating and pausing about what school they should attend, in order to induce them to enter; and much to the credit of these diplomatic arrangements, that many youths were ensnared by anticipating that the same ample supply of *subjects* would continue throughout the season. The inventors of this scheme were enabled to effect this by the liberality of the Inspector of Anatomy, whilst he displayed his true friendship by not acquiescing in the solicitations of teachers of other schools, in not giving them any supply whatever.

KING'S COLLEGE.

It is not long since we gave an account of the normal condition of this ultratory institution, and we have much satisfaction in announcing that it continues rapidly advancing into a state of robust health. The late appointment of Mr. Royle, to use the language of a *respected* and classic contemporary, "was a good hit of the Council of the College." But in order to insure a continuance of the vigorous condition of the institution, it has been unanimously agreed on by the *heads* of the profession, that an absolute repose for not less than five years will be necessary to produce *a radical change* in the constitution. In order to accomplish this most desirable purpose, it is contemplated to close the doors of the medical department for the length and period which has been advised by such high authority. The number of students is not so great as to create much uneasiness or anxiety in the minds of the Council of the College, though they may not have the consolation and gratification of being able to hand them over to the Guthrian School of Medicine (which is on the annihilation) to the

celebrated School of Medicine, Charing Cross, provided it meet with the sanction, approbation, and does not materially interfere with the benevolent objects of the Director General. It is also a matter of great deliberation, how far it may be prudent to mature the original scheme of Ex-professor Green of establishing a Steam Navigation Company to convey the students of the rising school to St. Thomas's Hospital.

ST. BARTHOLOMEW'S HOSPITAL.

The obstetric chair of the medical school of this hospital, having become vacant by the death of Dr. Hugh Ley, much excitement has been created, not only amongst the medical officers, but also amongst the students and governors; and great difficulties have arisen, and much warm discussion has taken place in the election of his successor.

It will be recollected, that on Dr. Conquest resigning this chair, Dr. Ashburner was duly elected, but after delivering a few lectures, such was the degree of dissatisfaction expressed by the students towards their new teacher, that the other lecturers of the school were compelled to look out for a substitute.

In the selection of the late Dr. Hugh Ley, they shewed that discrimination which might be expected, when intriguers and jobbers are compelled to choose a commodity which the student will employ; and so convinced were the governors of the necessity of selecting teachers for the medical school only from their known capabilities, that but a few months ago, they passed a by-law, the purport of which was, that those individuals only should be elected to any vacant chair, who possessed the most irresistible pretensions. This by-law at once upset the old nefarious system of selecting teachers only, from amongst those who belonged to the hospital. But the events which have taken place since the death of the late Dr. Hugh Ley, exhibit the manufacturers of this new law in a most contemptible aspect, for no sooner does an opportunity occur of bringing it into operation, than they all combine together, and absolutely commit an act contrary to the spirit and letter of this new regulation.

At a meeting of the governors, it was unanimously agreed on, that they should elect Dr. Farre, a young man of great promise, though only emerged from the precincts of the university, and hitherto unknown in mystic walk of obstetricy.

No sooner had the students become acquainted with this *liberal* appointment, than they expressed great dissatisfaction, and some of the more intelligent, even disgust, at the total want of delicacy and dereliction of principle, in not throwing open the chair to competitors as laid down by their late by-law.

The sentiments of disapprobation expressed by the students made so deep an impression on the minds of the jobbers, that the enlightened and pious Dr. Farre, the parent of the young accoucheur, thought it expedient to present himself at the next meeting of the governors, and, in the most affectionate language of regret, to give in his son's resignation. It is but justice to the veteran to state, that the intention of the students had been *privately* intimated to him, it having been determined that had the intended new professor made his appearance at the Theatre, he would have met with

such reiterated and continued bursts of applause, that the opinion of the students could not be mistaken, neither by the professor himself, his worthy parent, nor the pliable medical staff of the Hospital.

At the next meeting Dr. Rigbey was proposed, and has been admitted on most extraordinary terms. He was recommended to the governors by the *liberal* lecturers of the school, Lawrence, Stanley, and Roupell, whilst he was opposed by Latham, Hue, Earle, and Vincent. The governors, however, finally agreed that Dr. R. should be permitted to offer himself on trial before the students, and there can be little doubt of the result.

WESTMINSTER SCHOOL OF MEDICINE.

This School is to be rased to the ground. An immense sum of money was expended by a joint stock company by ephemeral lecturers for the building of this edifice; and, notwithstanding every effort was made, in an eminent school of medicine, the speculation has failed, and the shares fell to an incalculably low discount.

We have much satisfaction to inform the profession in general, that in consequence of improvements in that vicinity, the attention of the civil engineer was necessarily directed in arranging the new streets, not only to the strictest economy, and the Board of Works has accordingly awarded an ample compensation for the annihilation of this celebrated School of Medicine.

We cannot help admiring the sagacity of Dr. Todd, in availing himself of the vacant chair at King's College, on the resignation of Mr. Mayo.

ST. THOMAS'S HOSPITAL.

Dr. Marshall Hall is still extremely anxious to get himself attached to a respectable public hospital, and with this view he has proposed terms to Grangerian School, which may or may not be accepted.

POOR LAW FOR IRELAND BILL

FOR THE

Protection of the Medical Profession.

We stated last week, that a most important law was under the consideration of the government, for the regulation of the hospitals, dispensaries, and other public charities in Ireland, which would place them under the management of a board composed of civil and medical officers, and thus completely separate them from the Poor Law Commissioners at Somerset House. We are now gratified to inform our readers, that a bill to this effect will be presented to the House of Commons, immediately after the recess, by Mr. Wolfe, the Attorney-General for Ireland, and that the government so highly approve of the measure, that they think a similar act ought to be passed for England. Now is the time for the British Medical Association to bestir themselves, and to urge some member in the House to follow the example of the Irish Attorney-General, and to get rid of the tyranny of the "Three Kings of Somerset House," and deprive them of the unconstitutional power they possess, and which we lament to state is grossly abused.

The merit of obtaining the act to which we have alluded, is entirely due to Dr. Phelan, of Conmell, the author of the valuable work on the Medical Charities of Ireland, and their abuses, and to Dr. Nugent, of Cork, surgeon to the

county goal, both of whom were deputed by the medical profession in the sister-country, to have an interview with the government, and explain to them the utter impossibility of working the English system of poor laws in a country so situated as Ireland, and particularly as regards the supply of medical aid to the poor. These philanthropic individuals have succeeded far beyond their most ardent hopes, and fully convinced the government of the absolute necessity of having the medical officers of public charities free from the control of the poor law commissioners.

They also urged the injustice, nay, barbarous notion of lowering down medical practitioners, to act on terms which are even insufficient to defray toll and horse hire, and which must deprive the sick poor of a due supply even of the cheapest drugs.

The force of this and other arguments was so deeply felt, by one of the poor law commissioners, that he candidly acknowledged, a bill similar to that already mentioned, was the only thing to remove the evil, now universally complained of by the surgeons of parish workhouses in England. It is therefore clear, from this admission, that petitions to parliament against the present system, would at this moment achieve the greatest good, and by improving the system of administering medical aid to the sick poor, and properly remunerating the medical practitioner.

THE POOR LAWS.

The guardians of the Warminster Union have refused to re-appoint the surgeons to districts at increased salaries; and one of the districts of the union must remain without a medical attendant, until fresh tenders have been entered into. Mr. Bleeck, who held the appointment last year at a salary of 120*l.*, had 1,200 cases under his care during the last nine months of his contract, which he regularly attended and supplied with medicine, besides vaccinating all the pauper children of the district. Mr. B. has been a loser by the contract; but offered again to take it on an increase of 10*l.* a year, which the guardians have refused.

Bath Chronicle.

At a numerous meeting of the medical practitioners of Leeds and the neighbourhood, on Thursday, to take into consideration the treatment of medical officers of unions by the commissioners and guardians, the following resolution was carried almost unanimously:—"Resolved by this meeting, that the means adopted by the guardians of the Poor Law Unions, acting under the direction of the Poor Law Commissioners, for procuring medical attendants on paupers, by advertising for contracts by tender, is derogatory to the respectability of the profession, and calculated to subject the poor to a cramped and inefficient system of relief.—*Leeds Dispatch.*

MISCELLANEOUS

MEDICAL BOTANY.

COMMUNICATED WITH THE VIEW OF CALLING THE ATTENTION OF NATURALISTS TO THE MEDICINAL PROPERTIES OF PLANTS.

By Dr. Castle.

X.

RUSTY CINCHONA.

This species of Cinchona, the *Cinchona Firruginea* of St. Hilaire,* is found in the dry mountains of the province of Minas Geraes in Brazil. It belongs to *Pentandria, Monogynia* of Linnæus, and *Rubiaceæ* of De Candolle. It is a moderate-sized shrub, sometimes not more than three or four feet high, at other times somewhat more lofty. The branches and the under surface of the leaves are clothed with rust-coloured villi, from which character indeed, the plant acquires its specific name. The leaves, usually three in a whorl, are on

* Remijia ferruginea, *Dec.*

short petioles, oblong-lanceolate, rather narrow and leathery. The flowers are in opposite, axillary, racemose fascicles, the racemes interrupted and scarcely branched. Calyx five-toothed; corolla tubular, with a five-lobed limb, tomentose on the outside; anthers linear; stigma two-lobed; capsule two-celled, opening from the apex, many seeded; seeds peltate, girded by a membranous wing. Like other individuals of the same family the Cinchona ferruginea yields a valuable astringent and febrifuge bark, which, by the Brazilians, is commonly used for all the purposes of Peruvian bark, and popularly called *Quina de Remijo*, or *Quina de Serra*, synonymes however, which are given to the bark of other Brazilian Cinchonas.

It has not yet been successfully cultivated in this country. BIB. REF.—*St. Hil. pl. usuel. bras. i. t.* 3.

XI.

POAYA IPECACUANHA.

The *Poaya-plant* or *Borreria Poaya* of De Candolle,* is a smooth perennial, about one foot high, native of the elevated pasture lands of Brazil, and especially in the mining provinces. It belongs to *Tetrandria*, *Monogynia*, of Linnæus, and to De Candolle's natural order *Rubiaceæ*. The stem of this plant is herbaceous, simple, and tetragonal; the leaves opposite when mature, sessile, oblong-elliptic, acute, and obliquely six-nerved on both sides of the mid-rib; the stipulas cleft into many long bristles; the whorles of flowers capitate, sessile, few, axillary, and a larger terminal one; the calyx consists of four acute, lanceolate-linear lobes; the corolla blue, smoothish, with the four lobes rather hairy above; stamens four, with the anthers exserted; seed-vessel a two-celled capsule, crowned by the limb of the calyx; and the seeds ovate-oblong, and marked in front by a longitudinal furrow. The leaves on being chewed at first manifest a sweet but afterwards an acid taste, and in the form of infusion or decoction have been advised in colic and other affections. The roots are white, and are frequently substituted with success for the ordinary Ipecacuanha.

I am not aware that the plant has yet been introduced into this country, but it belongs to a family some of the species of which are readily cultivated in any light soil in a stove. BIB. REF.—*De Cand. prod.* IV. *p.* 549.

* Spermacoce Poaya, *var.* a. *St. Hal.*

XII.

STAGS' SULPHUR-WORT.

A hardy and lofty umbelliferous plant found in the middle of Europe, from the Pyrenees to Austria. By Linnæus it has been described under the names *Athamantha cervaria*, and *Selinum cervaria*, but botanists of the present day consider it as pecies of *Peucedanum*, hence Cusson,* calls it *Peucedanum cervaria*. It belongs to *Pentandria*, *Digynia* in the Linnæan arrangement, and to *Umbelliferæ* in the natural system. The stem is terete, nearly simple, and from four to five feet high; the leaves bipinnate, glaucous; the leaflets ovate, auriculated on the outside at the base, toothed; flowers in compound, terminal umbels; the involucrum consists of many leaves; the margin of the calyx five-toothed; petals obovate, white with a purplish outside; the fruit oval, margin of the mericarps narrow, commissural vittæ two, superficial, dorsals ribs five, approximate, and the vittæ solitary in the furrows. The medicinal properties of the plant are antiarthritic and febrifuge; for the former it is employed against rheumatism and gout, and for the latter virtue, it is esteemed in Styria a valuable remedy in intermittent and remittent fevers.

The Stags' Sulphur-wort was first produced in England in 1597; it flourishes in any common garden soil, blossoms in July and August; and is readily propagated by the seeds. BIB. REF.—*Clus. Hist. t.* 193. *f.* 2. *Plench. icon. t.* 185.

* Lapeyr, abr. p. 149.

NORTH LONDON HOSPITAL.

WEDNESDAY, MARCH 22, 1837.

Two operations were performed this day in a surprising short time by Mr. Liston, the one occupying only one minute and thirty-nine seconds! and the second only sixty-seven seconds!! In both operations the performer had the invaluable co-operation of Mr. Richard Quain. Mr. Samuel Cooper was not present.

The first patient was an interesting young girl, aged fifteen years, who had been some time suffering from disease of the bones of the great toe of her left leg, which resisted all local and constitutional treatment. Her appearance did not indicate that the disease had made much inroad upon her constitution. An incision was made, along the inner side of the first metatarsal bone, and this bone, together with the great toe, was so removed, that two flaps were formed corresponding to the dorsal and plantar aspects of the foot; which were brought together by adhesive straps.

The second patient was a little boy, only five years old, and the disease in this case was also in the foot, but the [illegible]rsal bones were so extensively affected, that it was deemed imprudent to attempt saving any of them, and Mr. Liston unhesitatingly removed the limb below the knee. In this case also, the assistance of Mr. Richard Quain was invaluable, and the steady and composed manner in which he compressed the femoral artery at the groin, was remarked by several students near us. A flap was formed from the muscles of the calf, and the whole operation was executed in the incredibly short time mentioned above.

The only clinical observations made on these cases by the ambi-dextrous was, an allusion to the short time which he took in removing the metatarsal bone and its great toe, who said, "that in the dissecting room, even upon the *dead* subject, such an operation was frequently bungled at for three quarters of an hour!"

IMPUDENCE OF COUNSEL IN COURTS OF JUSTICE.

A correspondence has taken place between Mr. George, the highly respectable surgeon, and Mr. Whitehurst, the learned counsel, who, on the trial of Dimpsey for the murder of Marshall and his sister, accused the surgeon of *ignorance* and *impudence*. Mr. George called on the learned counsel for an explanation, in answer to which he says, it is for the judge and jury alone to decide if his remark be well founded.

Lincolnshire Chronicle.

En passant, it may be remarked, that in England a much greater latitude is allowed to counsel in regard to the examination of witnesses on a trial than perhaps in any other country. Those who are in the habit of frequenting Nisi Prius Court, at Westminster Hall, and elsewhere, are frequently disgusted, *usque ad nauseam*, by the impudence of counsel in such examinations. We have seen a learned serjeant, of twenty years standing, so press a young and beautiful girl of eighteen, upon questions utterly irrelevant to the point at issue, as to draw tears from her eyes. The judges presiding might, in all cases, prevent such disgraceful and unfeeling conduct upon the part of those who ought to know better; but they rarely, if ever, do.

ST. GEORGE'S HOSPITAL.

THURSDAY, MARCH 23.

THIS day would have also furnished us with a *blank* in the operative department, were it not for the fortunate appearance of an individual with a hare lip! who was eagerly seized upon, and who submitted to the operation with great composure.

A BLIND CHILD CURED BY MORISON'S PILLS!

At the trial of La Motte, at York, for the death of a woman from the effects of Morison's pills, administered by him to her, the witnesses for the defence very seriously discomposed the gravity of the court, by attributing the most miraculous effects to this quack medicine. One man said, that his child was born with one eye turned round in the socket, there being no pupil visible; but the infant had not taken six of Morison's pills more than one hour when the eye-ball began to turn, and the pupil began to develope itself.—*Blackburn Standard.*

EPEDEMIC FEVER OF THE WEST INDIES.

THE epidemic fever which has been prevalent in St. Kitts during the months of April, May, June, July, August, September, October, and November of this

year, presented different grades, from the mild to the aggravated, depending in some on the constitution, as it might be more or less suited to bear the febrile movements, or, perhaps, where energetic measures were not had recourse to at the commencement of the attack, even the abrupt vicissitudes of temperature frequently perceived in these months had great influence upon the disease. In many instances an altered expression of countenance for several days together, with an extreme debility of the animal frame, were apparent, and indicated that an attack of the complaint was close at hand, and, notwithstanding the variety of type and character which the fever assumed under the circumstances mentioned, I considered it as the result of a general cause, acting more forcibly by accidental circumstances against the functions of the human body. All the physiological phenomena tended strongly to show, that the first morbid impression of this fever was made entirely on the nervous system; besides, it was only in one or two instances that I observed any vascular derangement to follow the obvious deviation in the economy of the nervous system. The fever, as I before stated, came on with great lassitude; chilliness was soon afterwards felt, and this, in a couple of hours, was succeeded by headache, and a preternatural heat of skin; the feeble power in the muscles of respiration was such, that the patient usually spoke in broken and interrupted sentences; pulse frequent but without any firmness, and easily compressible. Let it, however, be borne in mind, that in no fever is the pulse more deceptive than in the one we are speaking of; at times it is from the first moment of assault unsteady, evincing great openness of the artery, resulting, I apprehend, from a want of tonicity; there were occasionally tremors and twitchings of the muscles of the superior and inferior extremities. Tongue thickly coated, being brown and dry in the middle, red at the tip, and rather whitish at the sides; here, indeed, the tongue had slight moistness; temperature of surface varied through the day, mostly higher at night than in the morning; considerable duskiness of the skin; urine extremely scanty, and what was voided was high coloured; breath offensive, the odour being peculiar; alvine evacuations commonly suppressed; now and then a diarrhœa ushered in the malady. After 18 or 20 hours continuance of the fever, if the symptoms were not ameliorated by remedial measures, there was great tendency to delirium, with continual tossing about, and from the onset there was dulness of the senses. At the corners of the mouth a viscid mucus was seen, and which was occasionally drawn out in filaments especially in protruding the tongue; countenance perfectly typhoid, having deeply marked on it the physiognomy of distress. If the disease still proceeded with uncontrolled violence, new and aggravated symptoms arose; and I understand from good authority, that the latter state of the patient was not very unlike that condition which is observed in the last stage of the paludal fever of this country.

It is necessary to state, that in this epidemic blood-letting was not employed by me except in one case, Charles Julius, residing at the time (11th March) at Guinea Bay, in this island. Julius is at present employed in the garrison of Brimston Hill. At the time I am speaking of, and just previous to his attack, he was at sea in an open boat, and was for many hours exposed to rain and wind. A severe pulmonary affection ensued, which he thought had been subdued by diaphoretic medicines which he himself had taken; however, in this he was greatly mistaken, so that when I was called in, to the epidemic there was superadded inflammation of the lungs. He was bled to 48 ounces, and although the pulmonic affection abated, yet with every care and good nursing he was three months before he recovered from the febrile disorder; in fact, his escape was altogether an astonishing one. From the circulating balance being greatly disturbed, from the sensorial debility prevailing in many organs, and from the rapidity with which the fever marched on to its acme in severe attacks, momently, too, committing devastation on important viscera, a bold and energetic practice was in such cases required. Calomel, which I had used so successfully in the fevers of the other colonies, and in all of them, both British and foreign, I have served for upwards of 26 years, was in the fever now under consideration less useful; for in the beginning of the severe cases where the violence of the fever at its onset was in some degree conquered by other remedies, or in the second variety or congestive kind, hereafter to be spoken of, calomel was essentially requisite in finally over-

coming difficulties, and conducing to the thorough restoration of health. But in all fevers where debility is a characteristic feature of the disorder, the system is particularly hostile to the specific action of mercury. In instances where the violence of the fever was conspicuous, and where there was little doubt that the fever was of the aggravated remittent kind strongly associating in disposition with the typhus of Europe, I immediately gave the following medicine, which I kept prepared in a small gallipot, so that no time should be lost:—℞ Extracti Nucis Vomicæ, gr. ij.; Olei Crotoni M. iij.: Pulveris Glycyrrhiz, q. s. Fiat Bolus.—This generally acted not only upon the bowels, but caused a gentle moisture over the whole surface. Vomiting also ensued, and it was pleasing to observe that after one or two evacuations in this way the stomach became quieted, although from the first moment of attack it was extremely irritable. The same result did not take place if antimonial or ipecacuanha preparations were used; on the contrary, they exasperated the irritability, and added to the distress. If the croton oil and nux vomica had not the effect intended, they were repeated in two hours after the first bolus had been taken. The nux vomica I found to be a mild relaxant, and by no means friendly to a recurrence of febrile spasm of the extreme vessels too often visible in this malady. A tepid bath of about 94, in which was mixed four or five gallons of new rum, or high wines, was next resorted to. The patient was kept in this bath for at least ten minutes. If the spirit could not be speedily obtained, about five small breakfast cupsful of muriate of soda were then thrown into the bath. During the operation of the croton oil and nux vomica, the patient was allowed, according to the circumstances of the case, to drink negus or a little brandy and water warm, in which there was some grated nutmeg. In fact, in severe attacks of this fever, and under the effects of the medicines prescribed, such potations were not to be dispensed with, taking care that due moderation was not overlooked in administering them. The intestinal canal being cleared of its contents, the medicinal prussic acid was given; the form of the prescription was—℞. Acidi Hydrocyanici Medicinalis, M. xij; Infusi Panis tosti, ℥ iiss; Syrupi Limonis, ℥ p. Misce, Capiat Cochleare modicum ter quaterve in die.

It may be asked with what view I ordered the hydrocyanic acid. It is a truth well known to me, and as originally stated by Dr. A. T. Thomson, that the acid reduces morbid irritability of the stomach, enabling the juices of that organ to be more slowly secreted and of a more healthy character, objects of consequence in the fever, but I have still higher notions of its virtue as a magnificent sedative in asthenic remittent. The ordinary drinks differed a little in their nature. Where there was any tendency to putrescency, great internal heat, accompanied with much restlessness, the nitric acid diluted was given, in proportion of two drachms of the acid to two pints and a half of barley or rice water, sweetened with an ounce and a half of simple syrup. In patients, where the tendency to putrescency was not so apparent, where the internal heat and restlessness were not so evident, the tisana camphorata drink was preferred; and this drink was composed of forty grains of camphor, three drachms of spirit of nitric æther, one ounce of honey, and two pints of boiling water, and which was a very common and useful drink. If there should be a soreness, with a sense of stricture about the præcordia, and a feeling of heat there alone, a large blister over the part will be serviceable, yet this will seldom happen, except at the commencement of the disease, or where the fever has not been taken in time. In one instance, it was necessary to blister the head, but the blister was a narrow one, and confined to the course of the sagittal suture. From the first moment of attack, the feet and legs had on stockings, thickly dusted with cayenne pepper. A judicious moment to administer the sulphate of quinine will, under the methodus medendi now recommended, quickly offer, independently of its tonic power—it will be valuable in equalizing the sensorial fluid; the stomach, however, must be in a fit condition for its reception, confusion of intellect must have subsided, and the skin must be soft and moist; in short, the violence of the disease must be evidently subdued. Five grains of the sulphate of quinine in two drachms of water, to which twelve drops of vitriolic acid are added, will be found to prevent any returning mischief, or in moderating such mischief, should it return, as to render ordinary measures

amply sufficient. During the course of the fever, the patient may have animal soups and jellies, but, of all useful farinaceous substances, the sous les mois will meet every just expectation; in reality, it is the only food that the patient relishes, or rather that he does not get suddenly tired of.

I have not spoken highly of calomel in this grade of the fever, though I have given in some cases as an auxiliary in the battle, that is, in the aggravated variety now particularly alluded to, and after the croton oil and strychnine had been administered so as to produce their effects, its efficacy in the first two varieties is unquestionable, and its occasional necessity, under proper management, in the present form, cannot be denied, but this is an anxious and nice point to regulate, for I know of no febrile disorder that requires the medical practitioner to act with more resolution than in this variety of the asthenic remittent. Moments are here precious, and, after the administration of our principal remedies, we may successfully call to our aid others, in which may be classed calomel and minute doses of tartarized antimony as auxiliaries in combating untoward symptoms that are developed in the progress of the disease, but these auxiliaries are not to be entirely trusted to, keeping in view that there are idiosyncrasies which render even moderate doses of calomel peculiarly dangerous. I hope that I shall be better understood by stating that I have long considered the asthenic remittent fever as clearly divided into three varieties or degrees, and the asthenic remittent, lately prevalent in this colony, has indisputably exhibited these three varieties.

The 1st is the simple, or mild asthenic remittent fever. The 2nd, the congestive asthenic remittent. And the 3rd. the aggravated asthenic remittent; that on which I have been alone speaking of in this paper. A little attention to individual cases will make these varieties readily recognised. In the mild and congestive forms, calomel is a principal remedy; whereas in the malignant form, when used, the system being on the rally, it is only as an auxiliary, and suitable periods must be selected for its administration, so as not to interfere with our other curative means, on which we chiefly lean at the commencement. If, however, we have cases where symptoms urgently indicate the propriety of bringing the system speedily under the influence of mercury, large doses of calomel could not make its timely and powerful impression on the morbid movements of the human frame in the short period which this fever runs its course, the third, and sometimes the fifth day, being the usual career of the 3rd variety of the asthenic remittent, in such instances the most efficacious mode of introducing mercury into the system, and thereby grappling with the morbid associations, is by mercurial fumigations, as detailed in my observations on the yearly return of diseases which occurred in the right wing of the 5th regiment, and in the garrison of Morne Bruce, Dominica, from 21st December, 1824, to 20th December, 1825. This summary alludes to the cases of malignant remittent fevers successfully treated by me in the 13th regimental hospital, at Martinique, in the year 1809, by mercurial fumigation; the cases being in 1809 forwarded to Dr. A. Baillie, inspector of hospitals. The original Annual Report for 1825 is in the Army Medical Board Office. And my yearly return of sick and wounded, in the left wing of the 93rd Highlanders, the detachment of royal artillery and military labourers, stationed at St. Christopher, from December, 1825, to December, 1826, contains also a similar favourable report of mercurial fumigation; and the remarkable case of Gunner Francis Short, of the royal artillery, who was admitted on the 6th of August, and was in a deplorable sinking state on the 9th, when I fumigated his flannel shirt, ptyalism in this patient came on in four hours after, and the bad symptoms immediately went off, and left him only in a most debilitated state.

(To be continued.)

ERRATA.

No. 267.—Page 857, line 2 from the bottom for *Tarandyubiu*, read *Tarandyubin*.

No. 268.—Page 885, for *De Condille* read *De Candolle;* line 28, for *vol.* 386, read *vol. IV. p.* 386; line 34, for *Dyginia* read *Digynia;* line 38, for *acid* read *arid.*

Page 886, line 33, for *oblete* read *obsolete.*

All communications and books for review to be forwarded, carriage paid, to Dr. Ryan, 4, Charlotte-street, Bloomsbury-square, or to E. Cox, Medical Bookseller and Publisher, St. Thomas's-street, Borough.

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